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Outdoor Recreation in Virginia*

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COVER: A hardy fish for hardy fishermen, the walleye is most active when the water is cold and provides a better excuse to keep angling gear handy in mid-winter than most fresh water species. It prefers deep, cold waters over gravel or rock bottom. Our artist, Duane Raver, has shown a walleye in pursuit of some young redhorse suckers.

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Talking Turkey Again

NOW that the facts are known it can be stated categorically that experiments with a "gobblers only" spring turkey hunt in Virginia have paid off handsomely.

First tried out only on a few designated wildlife management areas, then in four counties, and last year in 43 counties, spring gobbler hunting has provided thousands of additional hunter days of the highest quality outdoor recreation *without the least adverse effect upon the following season's population of young birds* (which unfortunately is a lot more than can be said for fall turkey hunting in most areas). Wherever hunting pressure has been responsible for a reduced turkey population the following year, it has been the indiscriminate shooting of both sexes in the fall that has done the damage.

The advantages of continuing this special spring hunt, and expanding it to other counties where it has not yet been permitted, are obvious. It is a long time from mid-winter to the next fall. An early morning trek into the green forest in late April or early May is a refreshing outdoor experience, the likes of which will be encountered at no other time or place. A short hunting period at this particular time greatly enhances the recreational value of our wildlife resource, by spreading its use a little more uniformly among the several seasons. What seems almost too good to be true is that spring gobbler hunting puts *no additional strain on wild turkey populations*. The proposition that such hunting costs virtually nothing in terms of future turkey populations sounds so good that a few people still find it hard to believe. Human experience just doesn't condition people to expect to get so much for so little.

This is why even biologists who have studied the wild turkey extensively in Virginia moved cautiously and slowly in recommending spring gobbler hunting in the first place. Several years ago they *thought* they could see that a lot of the finest turkeys in our woods, along with all the hunting opportunities those birds represented, were going to waste. They *thought* there was a way to harvest excess male birds, after the peak of the spring mating season, without affecting the success of the oncoming nesting season at all. Other states did it. Could Virginia, too, harvest a bonus crop of turkeys in the spring, without paying a cost in fewer or smaller broods raised during the summer? It took years of gradually expanding experimental spring shooting, with thorough observation, analysis and evaluation of results, before they were convinced. Now they are sure!

Last spring nearly 1600 hunters put in almost 4000 man-days of gobbler hunting during the week-long spring season in 43 counties. They bagged 280 fine, adult, bearded birds. Those interviewed, orally and by questionnaire, reported after the season that they had located *ten times* as many gobblers (3.68 per day) as hens (.34 per day). The hunt had been scheduled, as planned, at the end of the gobbling season when the hens were no longer associating regularly with the still strutting and gobbling males. The notion that spring gobbler hunting, properly conducted, interferes with nesting success simply is not borne out by the facts.

The value of spring gobbler hunting as sport and recreation of the highest quality has been proved beyond doubt. Its cost, in terms of detriment to wild turkey populations, is nil. To those hunters who remain skeptical we say, try it! To people who doubt the wisdom of extending it to still other counties, we say the same: give it a fair trial! You will see!—J.F.Mc.

HAVE just read your article on "Wrong Side of the Road" in the November issue of VIRGINIA WILDLIFE and want to congratulate you on the splendid article. I sincerely believe that you have a purpose in life connected with God, which is wonderful, and I will always hope that we amateurs—hunters—will keep the thoughts that you have expressed in mind.

William J. Grant
Richmond

Stream Fisherman Speaks

MY 16 year old son and I have had considerable success fishing for smallmouth bass in the Shenandoah's Goose Creek and the Rappahannock. Since the river banks are privately owned, we were forced to enter at highway crossings and wade. This turned out to be a boon. We catch more fish, most of which we release, than we ever did bank fishing. Still we think it would be a good idea to have more access points to non-landowners.

One way to do this would be to require landowners along the streams such as the Shenandoah between Route 7 and Route 50 (for example) to provide access points at reasonable intervals, for a modest charge of course. The reasoning is that the public (the State) which owns the stream is denied the use of the stream (for fishing) because of private property. I don't know what legal action would be needed, but societies usually can find ways of doing agreed upon things. You lay great stress upon the opportunity to obtain hunting and fishing permission from private landowners, but it isn't as simple or easy as you imply unless you have lived 40 or 50 years in the same community. The name you see painted on a shingle on the property may be that of an owner who lives 200 miles away.

Could you tell me what white fungus (silky filaments) was attacking the smallmouth and the creek chub (suckers) in the North Fork Shenandoah near Woodstock and near Strasburg in May? There were patches the size of a silver dollar, sometimes over the eyes and head.

We enjoy each issue of VIRGINIA WILDLIFE, especially the fishing stories by subscribers. We have so many favorite fishing spots it would be hard to choose *the* one. This year I have bought and used fishing licenses in Montana (Gallatin River), Colorado (Cache La Poudre River), New York (lakes around Watkins Glen), but topping them all in my book is the Rappahannock between Remington and Fredericksburg.

Warren R. Bailey
Falls Church

A fungus, Saprolegnia, attacks fish which have been injured or weakened after a hard winter. Sometimes this fungus infection is associated with the bacterial Columnaris disease.—Ed.

(Continued on page 26)

SUCCESSFUL UPLAND GAME PROJECT WILL BE CONTINUED

By C. H. SHAFFER, *Supervising Game Biologist*
and JIM McINTEER, *Chief, Education Division*

UPLAND game management as it is practiced in Virginia today was unknown in the state fifteen years ago when an infant project was born that was to grow, and change (as healthy youngsters are supposed to do), until it developed into a robust and vigorous teen-ager whose size and features could not have been anticipated in 1948, even by the proud parents who presided over its birth.

Both the management of public hunting areas in Virginia, and the Commission's current farm game program, have grown out of the highly productive Pittman-Robertson Project (28-D) initiated a decade and a half ago. At that time public hunting lands (except National and State Forests) were almost non-existent. Money, trained personnel and special planting materials were inadequate to support a management program on the present day scale.

The original purpose of the project, to increase the supply of farm game in Virginia, generated two specific requirements: applying the best known game management methods to farm game habitat throughout the state; and developing even more effective management tools and techniques at an accelerated pace.

Improved farm game management techniques have been developed and tested. They are expensive if applied intensively over a large area through the use of hired labor and equipment. But they are effective; and when they can be applied in conjunction with normal farming operations, utilizing machinery already available on the land and personnel who are willing to do the work as a "labor of love," the cost is not prohibitive.

Any owner of farm game habitat in Virginia now can be shown how he can improve that habitat so as to virtually guarantee the annual production of a harvestable surplus of small game, and he can be supplied with specifically developed planting materials—annual game bird seed mixture, and perennial shrub seed—which he will require.

As for the other phase of the project—application of these improved techniques—a good start has been made. Further progress on privately owned land is now a matter of education, demonstration, encouragement of local initiative and continued assistance in obtaining special planting materials. On publicly owned lands that are suitable for production of farm-type game crops, further progress can be made just as rapidly as available financial and personnel resources permit. *Through the work already accomplished a sustained yield of small game from areas open to free public hunting (regarded as an impractical undertaking only a few years ago) has become a reality.*

Early Operations

When PR 28-D was initiated it was obvious that a significant increase in farm wildlife populations could be achieved only through habitat improvement on a vast scale.

More complete report on this project has been published in booklet form and is available free from the Commission of Game and Inland Fisheries.

To attempt to apply intensive wildlife management practices on even a major portion of Virginia's 150,000 farms would have been an undertaking far beyond the Commission's means. It was decided, instead, to direct efforts toward farm game demonstrations, and education of the public in basic farm game management techniques. It was assumed that excellent planting demonstrations and abundant wildlife populations on certain selected farms naturally would encourage neighboring landowners to carry out similar work.

The first acquisitions for the project were two jeeps with two sets of farming equipment (plows, discs, tillers and trailers). There were at that time two biologists and two sets of equipment for 68 counties east of the Blue Ridge. Rain and wet grounds during the first planting season limited the use of the equipment to a mere seven days. Results were not encouraging. New approaches to the problem were sought.

Additional technically trained personnel were hired, and game biologist districts were established. To reinforce their own efforts, biologists undertook to obtain all the available assistance from individuals and agencies that might encourage Virginia's landowners to practice farm game management. One of the first agencies which offered assistance was the Soil Conservation Service. Formal cooperative agreements between the various Soil Conservation Districts and the Virginia Commission of Game and Inland Fisheries were worked out. These cooperative agreements have had

The original purpose was to increase the supply of farm game in Virginia.

Commission photo by Kesteloo





VPI Wildlife Research Unit photo by Mosby
Quail in bicolor lespedeza. A good wildlife planting in the right place almost guarantees a covey in the fall.

many far-reaching, long-term effects on land use and wildlife populations which stand high among the important permanent accomplishments of the project.

The Virginia Extension Service and local county agents have assisted materially in achieving the objectives of the project.

Many vocational agriculture instructors and their organized classes (F.F.A., 4-H Clubs and veterans' farm training groups) have cooperated, and thousands of outstanding management demonstrations have resulted from their efforts.

Local sportsmen's clubs and civic organizations have played an important role in farm game habitat improvement programs by providing incentive to farm youth. Often these efforts were directed toward planting contests, with sponsoring organizations supplying prizes for the most deserving wildlife developments.

The Game Commission's Law Enforcement Division personnel have been most active in the entire farm game program since its inception. In most of Virginia's counties game wardens have made the local contacts, delivered planting materials, and helped in evaluation and follow-up operations.

Nurseries Established

When it was decided to provide shrub lespedeza plants to cooperators without charge it became essential to have a reliable source of large quantities of these shrubs for distribution. Some plants could be purchased from the Soil Conservation Service. Arrangements were made with the Beaumont Training School for the production of some of the planting stock. Soon, however, permanent plant production nurseries were established on the Cumberland Forest. Raising, digging, counting, bundling, delivering and heeling-in millions of plants annually became an enormous task as the scope of the project broadened. Setting out millions of shrubs along woods borders was also a big job for cooperating farmers and sportsmen. It was often noted that when springtime rolled around, and other farming operations were at their busy seasons, much of the enthusiasm for wildlife borders rapidly waned.

Meanwhile, biologists had been experimenting with shrub lespedeza seed. It was reasoned that since farmers made their living by planting crops and were skilled in handling seed, they would prefer lespedeza seed over plants and would thus do a better job. The plants cost between \$5 and \$10 per

thousand, whereas a pound of seed, which would plant a similar sized area, could be purchased or produced for approximately \$1. If the farmer did not get the opportunity to plant one year the seed would still be available, whereas plants would not.

One of the most significant discoveries uncovered by project personnel resulted in the development of a satisfactory direct seeding technique for shrub lespedeza. This technique completely revolutionized the farm game program at a great saving of labor and money. It also made the task of creating a wildlife border easier for the cooperator. Thereafter, the demand for plants diminished rapidly until the spring of 1955 when the last bicolor lespedeza plants were grown and distributed. During the peak years of 1951 and 1952 approximately four million plants were delivered to farmers throughout the State.

Through the early years of the project, biologists worked closely with research personnel from the Soil Conservation Service's Sandy Levels Nursery in Pittsylvania County. Plants which appeared to have possibilities for wildlife were often obtained and planted in larger experimental observation blocks on the Cumberland Forest, Hawfield and other management areas. If wildlife utilization indicated an outstandingly preferred plant, then seed production nurseries were established to obtain a large source of seed for future distribution. In this manner early seeding varieties of shrub lespedeza were developed, and later grown in such quantities as to justify distribution. Common varieties were found to be unreliable seed sources in many sections of Virginia due to early frosts in the fall. Through painstaking selections, early seeding strains were developed and made available for seed production blocks.

Nine acres of early-seeding lespedeza (VA-70, VA-72 and cyrtobotrya) production blocks were developed on the Cumberland Forest in 1954 and have been combined every year since. The usual annual production of between 1200 and 1500 pounds has been allocated without charge to Virginia farm game cooperators. This seed is not available through the usual commercial sources and is thus invaluable to Virginia's current farm game program.

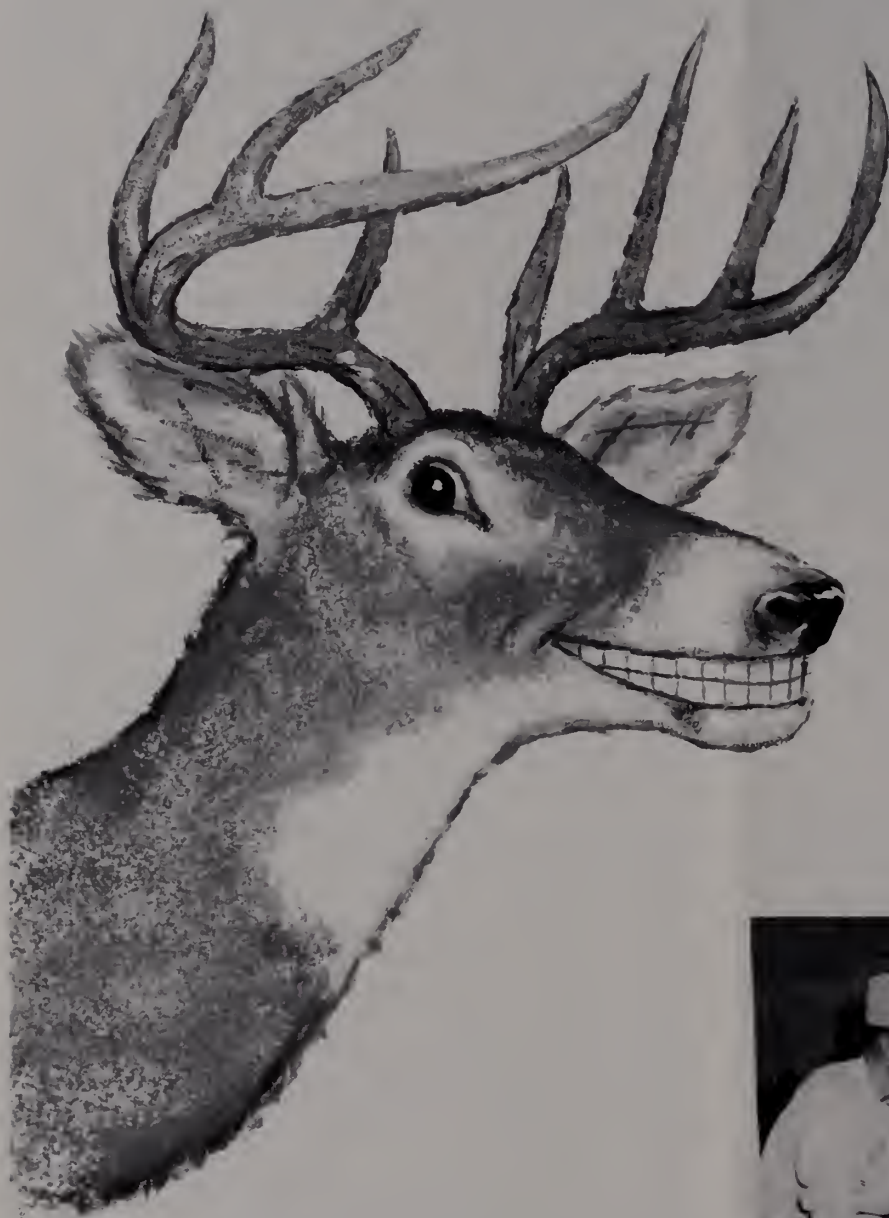
In similar operations 10 acres of Arlington sericea (a superior variety) has been combined every year and allocated to Virginia's landowners. In an average year, approximately 4,500 pounds of seed have been produced.

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Such excellent plantings as this produce an abundance of wildlife and encourage similar work on neighboring lands.

Commission photo by Kesteloo





ALMOST EVERYBODY WAS HAPPY!

By DOROTHY E. ALLEN
Education Officer

IF Leon Kesteloo, Commission photographer, could have taken a picture of the whole west of the Blue Ridge on "D" Day (opening day of the 1963 deer hunting season), he would have developed a prize winning "watermelon grin" on his film. A camera can only catch the surface it views, not elated inner emotions, and even words lack expression to convey deep feelings. If a true reflection of "D" Day could have been photographed, you would be able to view:

- Veteran hunters jubilant over seeing so many deer.
- Novice hunters in their teens, shy but proudly wrapped in smiles over their trophy. It did not matter if their prize was a button buck or a female yearling; they had by skill outsmarted a whitetail.
- Biologists pleased and happy that deer management theories, based on research and study, are "panning out" in Virginia.
- Checking station store owners congratulating the victors who gathered around buying cold drinks and sandwiches. The hunters constantly repeated tales of their successful hunts while waiting around to see if a joshing acquaintance would bring in a larger buck.



Commission photo by Kesteloo
The author checks a 95 pound, four-point buck brought in by 15-year-old John C. Brown of Alexandria.

What about the deer? After prying open the stubborn, death-closed mouth of the first *Odocoileus virginianus*, we noted that even the deer seemed to reveal their teeth in a somewhat smiling manner. The first 20 or 30 carcasses did; after that it appeared to be more of a sneering, "You've got to do the work in the end," as the sharp molars of a yearling brought blood to the index finger and the vise grip of a closed-mouth buck caused the pry to slip and smash a thumb.



Commission photo by Kesteloo
Warden Dave Ramsey weighs in a nice buck downed by fish research biologist Eugene W. Surber.

Perhaps a few not-too-happy photographs could have been developed. There were the old stories:

"A nice big buck got away so I took this doe."

"Heard plenty of shooting, but saw no deer."

"It was too hot to sit still. This kind of weather you got to go "injuning" deer. (True, 70 degrees is really too warm for a good brisk hunt. Deer hunting is a test of patience—and patience is almost impossible without comfort. The hunter was stalking his way back to camp to shed his insulated underwear.)

A farmer who had complained because deer had eaten his corn crop in the summer now complained because he couldn't go out on his back stoop and shoot one. He remarked that many more fawns were seen this year than in the past. (Twin fawns from healthy adults is the rule. The better nourished the does, the more fawns they produce, and the better chances the fawns have for survival after birth. Fawns from underfed does stand a poor chance of surviving their first week of life.)

Checkers at the Mt. Falls station had not a moment's rest. There seemed to be more hunters this year than last. Cars bearing carcasses of deer lined the drive. It looked as if one deer was coming in under its own power, until a proud lad crawled out of the the camouflaged Volkswagen.

One large station wagon driver with a "Dan'l Boone" air asked if he could get his game checked. After a thorough search a rabbit and a fawn were found. It became a debatable issue among the four city hunters which whitetail should be weighed, and which fried.

Hunters usually ask, "How old is my deer?"—either to satisfy their curiosity or to settle an argument over who shot the oldest whitetail. A game biologist has more than a curious interest in deer ages. Data gained at checking stations is invaluable in keeping track of the size and quality of the deer herds, and is even useful in making cautious

predictions about next year's crop. For instance, if there are more big, well developed, healthy does this fall than last, there is a probability that next spring's fawn crop will be materially larger than the current one. If fawns (both male and female) taken this fall are in better condition and show better development than last year's fawns, it is probable that the range is *not* overcrowded and is actually improving—that enough animals are being removed annually to insure a high quality herd—and that hunting restrictions could even be tightened a little, and the size of the herd built up without sacrificing quality. But if yearlings show up with weights and antler development that make them look more like fawns, and if real fawns are scarce and scrawny, it is likely that the deer have become too numerous and that a reduction in the size of the herd, by increasing the harvest of antlerless animals, may be in order. These are the kinds of facts and indications the biologists look for at the checking stations, and the kind of data they sift, analyze, weigh and compile for the Commission to use in its deliberations when the time comes to formulate next season's hunting regulations. To compare this year's with last year's animals, however, or to compare the size and development of either with a norm, it is necessary first to break the checked deer down by sex and age group. Obviously, the average weights and measurements of a mixed bag of fawns, yearlings and older adults would be useless data.

The best way to age deer is by checking the condition of their teeth—"Severinghaus technique"—based on replacement and wear. There are 10 teeth on each side of the deer jaw: four incisors, three pre-molars, and three molars. The pre-molars are replaced at 18 months of age; the molars are permanent teeth. The third deciduous ("baby tooth") pre-molar has three points and is replaced by a two-pointer pre-molar. Beyond the age of 1½ years, abrasion or wear of the permanent teeth is the age indicator.

A hunter is pretty optimistic about the weight of his deer. He is inclined to think the deer carcass gains weight at the rate of about 15 pounds for every quarter mile he carries or drags it. As a rule he overestimates its weight by about 25 to 30 per cent.

Deer managers are concerned with weight as an index to deer nutrition. Where average weights are good, each deer is getting a reasonably adequate diet. Where weights are low, they are not. Checkers generally were happy to note that deer were much fatter this year than last, and appeared extremely healthy. At one station in Shenandoah County the average weight on a sampling of 36 yearlings last year averaged 89 pounds. This year at the same station a sampling of 36 yearlings averaged out around 107 pounds.

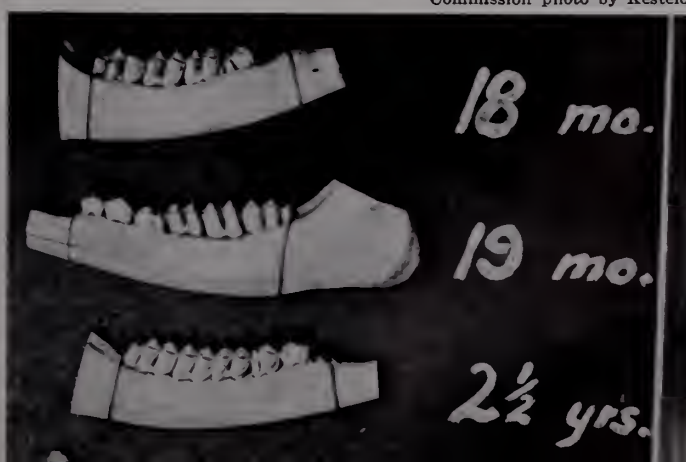
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Game biologists' interest in deer ages stems from more than idle curiosity. Accurate aging is accomplished at checking stations by careful examination of animals' teeth.

Commission photo by Harrison



Commission photo by Kesteloo



The Controversial MR. BEAVER



Commission photo by Kesteloo

By C. P. GILCHRIST
Wetlands Investigations

AMONG the wild animals of Virginia that can stir up a controversy between men without half trying, the beaver stands high. Most people who are familiar with the beaver either are all for him, or have not a kind word to say in his behalf.

Complaints against this four legged woodland engineer are many and varied. He is said to cause flooding of valuable lowlands. He is accused of cutting down or otherwise killing all the good timber in the area in which he sets up housekeeping with his mate, and of destroying corn in adjacent fields. He is condemned for using highway fills as dams, and persistently stopping up the culverts under them as fast as highway maintenance crews clean them out. He is declared a general nuisance.

These accusations in some cases are all too true, but a good courtroom lawyer arguing in the beaver's defense could introduce a good deal of evidence in mitigation of his client's crimes. In most cases the lowlands that are flooded

are covered with stands of alder, maple and gum that would never produce much of a crop of marketable timber. While crop damage is serious where it does occur, few beaver ever choose home sites close enough to agricultural land to put themselves in the way of temptation to indulge in this sort of depredation. Probably the beaver's most serious offense against his human neighbors, the one which has to be admitted even by his defenders, is his plugging of pond spillways and highway culverts. He just cannot resist the temptation to fix what looks to him like a leak in a dam!

People who discount the beaver's nuisance effect, and who are inclined to accentuate the good that comes from his woodland waterworks, can point to many benefits associated with beaver ponds. They act as small water reservoirs which conserve ground water, reduce flood damage, and retard soil erosion. They act as feeding and resting areas for waterfowl, and make good hunting areas. Deer and other animals use the ponds as water holes during times of drought. Beaver ponds often become good fishing holes, especially for pickerel. They are a source of a money crop of fur for landowners, who often trap a few of the beaver each year, and an even larger number of other fur bearers such as muskrat, mink and otter which utilize the habitat created by beaver ponds. And if beaver ponds tend to do a little damage to standing timber sometimes, they usually more than offset this loss by the contribution they make to the control of forest fires. During the severe fire season in Virginia last year, the control of a number of potentially serious fires hinged upon the use of beaver ponds on which to tie down fire lines.

But whether one be pro-beaver or anti-beaver, there is no disputing the fact that the unusual habits and behavior of the remarkable Mr. Beaver make him a fascinating citizen of our animal community.

The American beaver belongs to the order *Rodentia* and the family *Castoridae*, which contains one genus, *Castor*, and species, *canadensis*. There are at least 13 recognized subspecies.

This large rodent looks very much like a huge muskrat, except that its naked, scaly tail is broad and flattened. The sexes are practically indistinguishable except when the female is nursing young. The adults have a body length of 25-30 inches and a tail length of 9-10 inches, and vary in weight from 30 to 60 pounds. There are records of beaver weighing in excess of 100 pounds. The color is generally a deep, dark chestnut on the back, and paler and grayer below.

Right: Beaver dams store water, and often provide good fishing holes. Below: Beavers cut hardwood timber, but most of what they cut has little value.



Commission photo by Kesteloo



The beaver is monogamous, and mates for life. The number of young per litter is from two to six, averaging about four. The "kits" remain with their parents for at least a year, and possibly until they are ready to mate near the end of their second year. At this time they are usually forced by the parents to leave the home den and set up house-keeping for themselves.

The beaver's diet consists of bark, water-lily and other roots, mushrooms, and berries. The principal item is bark or, to be more exact, the green cambium layer or inner bark that lies between the outer bark of a tree and the wood. His favorite food trees are poplar, aspen, willow, and birch. He readily eats the bark and twigs of most hardwoods. As a rule the beaver does not eat any part of the coniferous trees. He will, however, cut down pine trees to use in dam construction.

As the beaver is a semi-aquatic animal, it is necessary for him to have water near his food supply. Where rivers and streams are of suitable depth and food is near enough, the beaver does not build dams but lives in bank dens along the streams.

Where there is not enough water near his food supply to suit Mr. Beaver, this brings out his talents as an engineer. Small streams are dammed to flood lowlands. This serves two purposes. First, it gives the beaver protection from his enemies, as he is able to build his lodge in deep water far from shore. Secondly, it provides easy access to available food supplies and an underwater storage area for food during the winter. Limbs and twigs are gathered during the fall and stored underwater adjacent to the lodge for use when ice is on the pond.

When Mr. Beaver begins damming and flooding bottom lands, and killing and cutting trees, the difference of opinion begins to arise as to the good and evils of his work.

In cases where beaver damage outweighs the good the animals do, it is best that the beaver be removed. Usually the best method of removal is by trapping. As the beaver pelt is a valuable fur, it is uneconomical and wasteful to remove the animals even from an area where they are causing trouble when the pelts are not prime. Still, nearly every year, someone who made no effort to trap beaver during the winter months applies for a permit to remove a colony after the pelts have become worthless. Unless the damage is so severe that the landowner cannot wait, removal of nuisance animals should be accomplished only during the general trapping season (mid-December until March) when the pelts are prime and will bring top prices. Beaver pelts have been bringing the trapper from three to fifteen dollars

Commission photo by Kesteloo



Commission photo by Kesteloo

Even nuisance beaver should be trapped only when the fur is prime. Hides have been bringing from three to fifteen dollars.

apiece, depending on the size and quality, for the past several years.

In addition to the trapping of nuisance beaver, the trapping of other beaver is a profitable part- or full-time winter job for the landowner, his children, or the professional trapper. The trapper who traps for profit must be careful not to overtrap a pond. Over-trapping is very easy to do. The average undisturbed old beaver family is made up of two parents, four young that are two years old, and four young of the year. These are all the beaver likely to be found in any lodge—a total of about ten. In a new colony the number per lodge will be less. The trapper must remember this: When trapping for beaver that are not a nuisance, don't over-trap them if you want to be able to take some again the following year.

If you trap for profit, diversify your operation. Don't concentrate just on beaver. A beaver pond is an excellent place to catch other fur bearers as well. The beaver may be the easiest of all to trap out, and without him the whole ecology of the pond soon will disappear.

Even though he is a nuisance sometimes, is responsible for some timber damage, and has an inconvenient habit of stopping up culverts and drains, Mr. Beaver is a pretty nice fellow to have around—in the *right places*.

Left: Dams provide water deep enough to give access to underwater food stores in winter. Below: Dam building isn't his only engineering feat; he makes canals, too.

U.S. Fish & Wildlife Service photo by Scheffer



Is Your Future In THE WILDLIFE FIELD?

By DOROTHY E. ALLEN
Education Officer

FROM history you have learned that in the past we had fish and game for the taking. Buffalo roamed west of the Blue Ridge, flocks of turkeys dotted the Eastern Shore, passenger pigeons darkened the skies on their seasonal migration flights, shad caught were a yard long. As our population increased open space decreased, but professional management of our wildlife has been able to produce more wildlife on less land area. Since 1946 in Virginia the number of hunters has doubled, the number of fishermen tripled. Hunting and fishing are here to stay. This form of recreation is an 80 to 100 million dollar business in Virginia, and is growing in importance constantly. A recent report by The Center for Economic Projections of the National Planning Association estimates that the average family income in 1973 will be \$9,300; the average work week is expected to be 37.4 hours. People now spend seven days a year in outdoor recreation; by the year 2000 the average person will spend 28 days per year outdoors.

Jobs of new types will open up in the wildlife field. Within the past two years the Commission has created several new positions to keep abreast of the times. A *safety training officer* has trained all wardens as hunter safety instructors, who in turn teach our hunters and Virginia youth the proper respect for firearms. A civil engineer with the Commission plans boat ramps and new lakes. The Commission is trying to do its part to fulfill the recreational demands of the ever-increasing number of those who hunt and fish. The opportunities for a future in wildlife work are bright.

Attention, Teacher

We have received numerous requests from high school students wanting to know how they can become a game warden. Many boys believe that, since they like to hunt and fish and hate "book learning," a job as game warden is the answer to their future. Still other students write and ask what subjects they should take in order to prepare themselves for a position as a biologist in the wildlife field.

The Commission seeks not particularly a person who loves the outdoors, hunting and fishing, but candidates possessing an educational background and certain personal characteristics. They look for good team workers and not a "have gun, will check licenses" star. It has been said that a game warden needs a bushel of common sense, a bale of mechanical aptitude, and a barn full of experience. He often works with a pick and shovel, drives a truck, carries over rough terrain an 80 to 100 pound buck, handles heavy seines and knows no set hours. He is a public relations man and must deal with people, not always under the most pleasant of circumstances.

A game warden's job is probably one of the keenest in competition. Two years ago over half of the 762 applicants applying for the vacancies in the Law Enforcement Division of the Commission of Game and Inland Fisheries did not have the educational requirements or background. Three hundred and sixty were selected for interviews, and physical and mental tests. Fifty-six men made the grade; they had the background requirements and passed all tests. The top 21 were selected to attend a special training course; finally, 18 were assigned as game warden trainees for one year before becoming full fledged wardens.

Fish and game biologists need to have taken specific courses that qualify them for a master's degree in their respective fields. There is no short cut, and no substitute for study.



Commission photos by Kesteloo
Checking hunters and fishermen, and presenting cases in court, are just a few of the many jobs game wardens are called upon to do.

History Of The Game Warden

The position of *game warden* did not originate in the United States but in England. When the English kings claimed sovereign rights to the forested lands, a game keeper or protector was appointed to guard the king's game from eager "Robin Hood" poachers. Hunting and fishing were privileged rights of royalty and the commoner was not allowed to hunt on the king's lands.

After America became the land of the free, a warden was appointed to protect the game for the people, to see that it was fairly distributed. Wardens were usually outdoor men, politically appointed but untrained for work as conservationists. As dedicated, farseeing men entered the wildlife field, conservation became a science and a new image of the game warden evolved.

In 1932-33 Virginia game wardens were identified by a black uniform and hat. This uniform was changed in 1939 to one of green with a maroon stripe down the leg of riding pants. Buckled leggings of hard leather completed the outfit.

Today our game wardens are dignified by a smart spotless forest green uniform, complete with tie, shiny shoes and a neat, small brim Stetson.

The first Virginia wardens furnished their own cars, paid their own mileage and expenses. In February 1961 the wardens were provided with vehicles identified by the seal of the Virginia Commission of Game and Inland Fisheries. Our wardens travel over 31½ million miles per year, and state-owned vehicles can be operated at an average of around

four cents per mile. In-service training has been directed toward making the Virginia game warden an informed, useful, conservation-minded protector of the public game and the public rights to that game.

To Be A Game Warden

So to be a game warden is your ideal! Last year you brought down your first big buck and this summer you outsmarted a citation size bass. You think if you could be a game warden you'd get to hunt and fish all the time, and that surely would be fun. Well, if you like to hunt and fish then be a doctor, an engineer, or a bank teller. If you become a game warden, you will be working: checking the license of the doctor who downs a deer, stocking fish for the engineer to land, and telling the bank teller just where he can go to flush a covey of quail. You'll be so busy working with wildlife for the public that if you get in one good hunt a year and perhaps a couple of annual fishing trips, you'll be lucky.

A game warden is not just a woods cop. He must be a master craftsman in the woods, and know the laws he enforces from A to Z. There is no place for routine. He becomes indifferent to hours and physical discomforts. His duties are challenging, occasionally dangerous, and seldom boring. Game wardens are proud and dedicated men. Seldom do you find one who would trade his work for a job of more glamour and better pay. Many things occur to give great pleasure and satisfaction. These rewarding experiences cannot be calculated in dollars and cents.

Now if you still want to become a game warden, start working towards this goal while you are still in high school. Belong to and participate in clubs. Such activities as 4-H, Boy Scouts, FFA help to prepare you in nature work and help you to adjust socially. Take an active part in sports; physical capabilities and coordination are important.

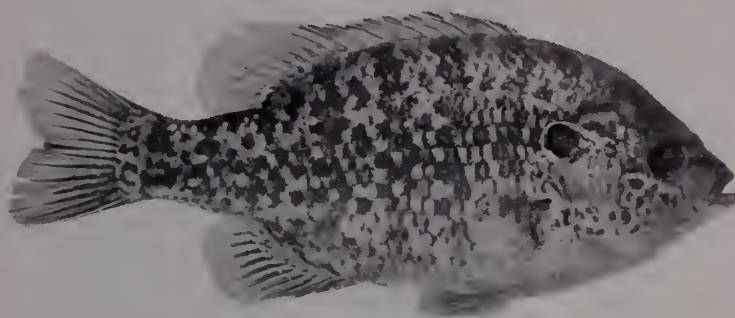
If at all possible, attend a nature camp. Work on projects of collecting insects and plant life. Learn to identify wildlife and birds you see. Visit a fish hatchery and talk with the biologist in charge. Get to know the game warden in your county and let him know of your interest in a future in the wildlife field. Perhaps he will let you follow him around on some of his survey work.

Basic courses in English, mathematics, biology, chemistry are of the utmost importance. If you loathe chemistry, hate biology, dread mathematics, you won't know about polluted water, won't understand the properties of soil, the anatomy of game, or how to figure out fish populations; and you'll never become a good game warden. If you would rather substitute fly-tying for chemistry and leather craft for biology, go into some other field. Speech classes are most helpful, for game wardens are called upon to speak before sportsmen's groups, civic organizations, and youth clubs. Participate in oral recitation. A game warden spends around 425 hours a year on public relations work.

A high school education with a good "outdoor activities" background will help to prepare you for a job as a game warden. On top of this develop a drop of humor, a pinch of kindness, and a fistful of stamina and you'll have a good chance of being considered worthy of wearing a Virginia game warden's badge in *your future* life's work.

(Continued on page 22)

YOU'VE NEVER CAUGHT A BREAM!



Commission photo by Kesteloo

By SFC LEO A. AUBREY
Fort Lee, Virginia

SOMEONE once said, "A rose by any other name is still a rose" and I guess that no matter what a certain fish is called it remains the same fish. However, wouldn't it save a lot of confusion and even arguments if we all used the correct names for each species and avoided using local names and/or nicknames? This practice (using local names or nicknames) can get confusing sometimes. Let's go into this a little deeper.

How many bream or brim would you say you've caught during your years of fishing? "Ah," you'll say, "I've caught thousands of them; always got my limit and sometimes threw back double my limit in small ones." Well, friend, unless you've been to Europe and done some fishing there you have caught exactly NONE! And for a very good reason. There is no such fresh water fish on the North American continent, unless it's in a museum or an aquarium. The bream is a European fresh water fish (*Abramis brama*) or a species of salt water fish, (*Lagodon rhomboides*). The first time I heard this name was in Georgia and I thought that perhaps some had been imported and stocked there, but I soon found out that it was nothing but a bluegill. So why not call it a bluegill? Believe it or not, if you mention that you've caught bluegill in certain sections of the country some people won't know what you are talking about. This fish is also called a perch and in New England a kivvie or kibbie. Confusing isn't it?

When I first arrived in Virginia an acquaintance asked me to go on a fishing trip for pike. I'd recently returned from Germany where I'd done quite a bit of pike fishing, so I was all enthused. We started out and stopped at a bait shop to get minnows. The largest minnows they had there were about four inches long.

"We'll never do any good with these minnows," I said. "They're too small."

"Don't worry," my friend said; "they're just the right size."

"Are you sure that we are going to fish for pike, Jack, because I don't see pike mentioned in this booklet on the fishing laws?"

"Yes, yes, pike," my friend said. "I've caught them in this lake."

After we had been fishing for a half hour or so I got a strike and landed the fish. "Wow," my friend said. "Sure got a nice pike there; it'll go about three pounds."



Commission photo
by Kesteloo

I looked at my friend and looked at the fish and said: "A pike! This is a pickerel." And then the argument started! Nothing I could say would convince him.

I've read where they have stocked pike in a reservoir in Virginia and that fishing for them will start in a year or so. Can you imagine the arguments that will take place when some fisherman brags to his friends about the fifteen pound pike that he killed? He'll be known as the biggest liar in town because the biggest "pike" that they have ever seen has weighed maybe five or six pounds. So what will they call a pike then? Great northern pike? Or northern? Maybe they'll call them muskies. (*Northern pike* is correct.) This calling of fish by the wrong name, especially calling a pickerel a "pike," probably has caused someone to neglect to enter a good sized pickerel in "*Field and Stream's*" annual fishing contest. It may even have lost someone a new world record. I know of one case in which an eight pound two ounce pickerel was landed, but it was called a "pike"; and although this particular fish won a ten dollar prize for the angler, as far as I know it was not entered in "*Field and Stream's*" annual contest where without a doubt it would have taken first or second prize. The fisherman lost some valuable prizes because of not calling a species by the correct name. The world record pickerel is a nine pound six ounce fish killed in Homerville, Georgia, in 1961. Other misnomers for the pickerel are jack, jackfish and snake.

When I first moved to Georgia, I was told about the eight and ten pound trout that were being caught. I checked on this and found out that the so called "trout" were largemouth bass. Want to get into a hot argument? Tell your fishing buddy that a bass is a sunfish. (It is.) This fish is also misnamed bronzeback, bigmouth and linesides. While stationed in Kentucky I went on a fishing trip for what I was told was white perch. I brought along a fly rod and I was told that I'd never get any white perch on that skimpy thing as the "white perch" there sometimes went up to twenty pounds.

"Twenty pounds!" I said. "Why the world record white perch is four pounds and twelve ounces, and that was

caught in 1949 in Maine." Well, we argued all the way to the river. The fishing was slow that afternoon, but after a couple of hours I got a strike and landed the fish which measured about fifteen inches, a so called "white perch." It was actually a fresh water drum.

Well, you may be saying to yourself, what do I care what they call the fish in another state? I've never been out of Virginia in my life and I don't ever intend to leave, so I know what I'm talking about when I call fish by the names I've always known them by. That may be true, but isn't it also true that the more you know about any sport or game the more you enjoy it? And it also helps you become more proficient in it. If you are going to engage in fishing for sport and/or recreation, won't you enjoy it all the more if you get fish every time you go on a fishing trip? There's a lot more to fishing than so called "luck." You can't expect to catch fish by just sticking your line in the water and hoping. Oh, sure, you might go out on your next trip and get a five pound bass on your first cast, just like a rookie ball player might get a home run his first time at bat in the big league. What we are talking about is being consistently successful. It's a proven fact that ten percent of the fisherman get ninety percent of the fish, and no one is that "lucky" consistently. How do they do it? By know-how and skill, by being able to "read" the water and by knowing the correct names. For instance, if you'd like to know more about "freckles" where would you look for it in a book on fishing? Well, you could search from beginning to end of the book but you'd never find what you were looking for because there is no such fish. You'd have to look it up as crappie. The same applies to bream or rockfish or silver or ring perch or grindle. These are all misnomers. A bream is a bluegill, a rockfish is a striped bass, a silver is a white crappie or a black crappie, a ring perch is a yellow perch, a grindle is a bowfin. And so on *ad infinitum*. (Want another good argument? Tell someone that a walleye belongs to the perch family. It does!)

For more on this subject there are several good books that can be purchased in paperback editions for a reasonable price. The following is a partial listing: *Fresh Water Fishes* put out by Colliers; *Secrets of Successful Fishing* by Dell; *The complete guide to Fresh and Salt Water Fishing* by Cornerstone; and, last but not least, the book put out by the Commission of Game and Inland Fisheries, *Freshwater Fishing and Fishlife in Virginia*. This is a very informative book and worth much more than its cost (25¢).

It constantly amazes me that bait house and boat landing owners do not use the correct names (especially in the case of calling a pickerel a pike) but persist in calling fish by local names or nicknames even when they have a poster on the wall where all the fish are correctly identified. But most amazing of all is that writers of outdoor and/or sporting columns persist in this calling of fish by the wrong names. This practice, to me, is misinformation. They should print an article in which they would inform their readers that the proper name for the so called "bream" was bluegill and so on, naming all the fish improperly called locally and putting down the correct names and from then on calling them correctly.

To paraphrase Gertrude Stein: "A fish is a fish is a fish," but a bluegill will never become a bream by being called one.

VIRGINIA WILDLIFE

CONSERVATIONGRAM

Commission Activities and Late Wildlife News ... At A Glance

FEE TROUT STREAM BEING DEVELOPED IN SOUTHWEST.

A section of Big Tumbling Creek on the Game Commission's Clinch Mountain Wildlife Management Area in southwestern Virginia is nearly ready for pay-as-you-go trout fishing next spring. Modifications for the fee fishing project include a resident manager's quarters, fish holding facilities, road improvements, parking areas and some streamside trails. An improved road is also being constructed along Little Tumbling Creek preparatory to opening it as a fish-for-fun stream in 1964.

Anglers on the pay-as-you-go stream will need a one dollar daily permit. The Commission plans to restock the water daily, the number of fish released depending upon the number of paying fishermen using the stream. Limits will be such that some may get more than their money's worth to preserve the sporting qualities of the fishing. Plans call for opening the fee fishing streams on April 4 with the opening of the statewide trout season. Hunters will benefit from some of the road improvements this fall, but the area will be open to small game hunting only.

HATCHERY READIED FOR PRODUCTION.

The Game Commission's Coursey Springs Fish Cultural Station in Bath County is being developed this winter so it can handle its full 250,000 pound per year trout production capacity. Construction now in progress includes 15 ponds 300-400 feet long by 10 feet wide and eight ponds of the same width about 100 feet long. Much underground piping is also required for water control.

About 25,000 rainbow trout are already being reared in portions of the facility that have been completed. This new station, the Commission's largest, will be used to handle the excess from overloaded facilities and to rear additional trout for new pay-as-you-go streams. No increase is planned in the approximately 650,000 fish reared for general release in the Commission's trout stocking program.

ORANGE COUNTY LAKE CONSTRUCTION BEGINS.

Construction on the 124 acre fishing lake being built in Orange County by the Virginia Commission of Game and Inland Fisheries began November 11. Construction is to be completed by May 9, 1964. Project costs are estimated at \$117,700.

The lake will be located on Clear Creek five miles east of Orange and will be accessible from State Route 629. A 3,200 foot paved access road will lead to a 1.5 acre paved parking lot and sanitary facilities on the lake shore. The earth fill dam will be 45 feet high and 900 feet long and will back up water in the "L" shaped lake to a maximum depth of 40 feet.

The lake will take an estimated 7 months to fill. Stocking plans call for the introduction of 800 bluegills, 200 redear sunfish, and 40 channel cats per acre in the fall of 1964. In the spring of 1965 fingerling bass will be added at the rate of 125 per acre. The lake will probably not be opened to fishing until the summer of 1966.

12" BASS LIMIT ON ROANOKE TERMED EXPERIMENTAL.

The 12" size limit on black bass in portions of the Roanoke and Dan Rivers recently adopted by the Commission of Game and Inland Fisheries is a large-scale experiment based on the success of a similar 14 inch minimum at the Commission's Front Royal Hatchery Ponds. The regulations became effective January 1, 1964. During the third year, the Front Royal experiments have shown a tremendous increase both in total yield and individual size of fish in ponds where the 14 inch minimum bass limit was enforced. The 14 inch limit ponds produced over twice as many pounds of bass per acre and eight times as many bass over 10 inches during 1963 as did the ponds where no minimum size limits were in effect. The percentage of bluegill 7 inches and over taken from the limit ponds was twice as great as the percentage of fish of this size from the ponds with no limit. In addition, 383 bass in the nine through 13 inch class were caught and released in the limit ponds during the May 1-September 5 fishing season. Mortality was reported insignificant.

The 12 inch minimum bass size applies to the Roanoke (Staunton) and Dan Rivers and their tributaries downstream from Niagara Dam on the Roanoke River and the Brantly Steam Plant Dam on the Dan River. The effects of the size limit on fishing in this large area will be carefully studied by fish biologists and the data will be invaluable in determining the desirability of applying such regulations to more extensive areas. The Front Royal experiments will also be continued to gain advance knowledge of the long term effects of the technique.



NEW RECORD WHITETAIL TOPS TROPHY CONTEST

By HARRY L. GILLAM
Information Officer

This downed monarch is the former all-time trophy contest record taken by Floyd Lam, which scored 252-10/16 points. It was finally beaten by this year's top head taken by Peter F. Crocker in Isle of Wight County which scored 267-7/16 points, setting a new Virginia record.

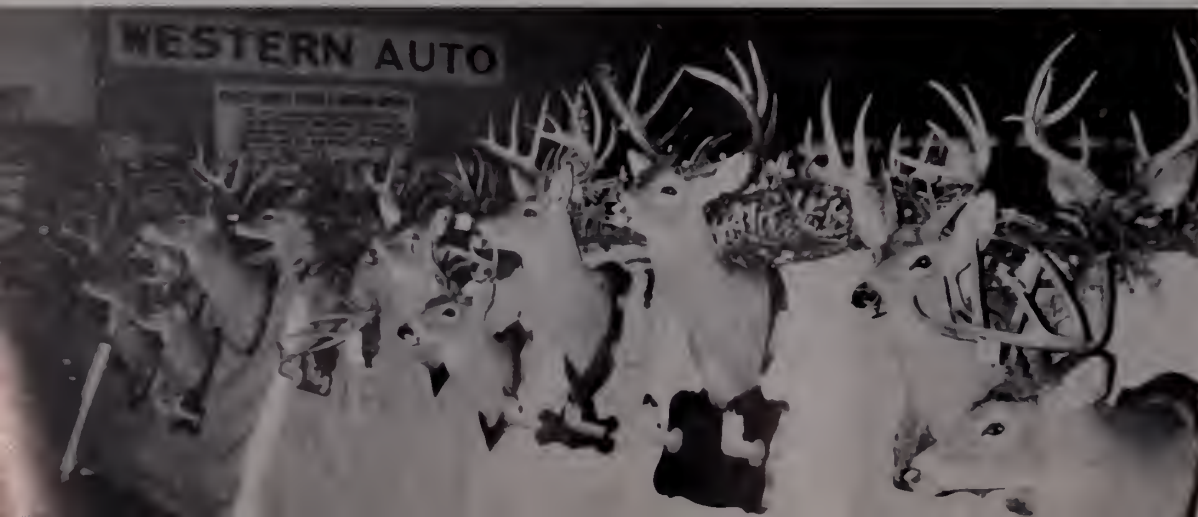
COMPETITION was tough and a new State record was set during the 1962-63 State Big Game Trophy Contest held at the Newport News Armory November 9. First place in the nine-points or over class was awarded to Peter F. Crocker Jr., of Windsor, Virginia, for a 20-point buck taken in Isle of Wight County. The antlered giant scored 267 7/16 points when measured according to modified Boone and Crockett System used, a new record for the contest and for Virginia. It beat the former all-time winner (252 10/16) taken by Floyd Lam by nearly 15 points. The massive Isle of Wight rack was also the *top* head in the Eastern Regional competition sponsored by the Peninsula Sportsmen's Association.

The number two head in the top class was an eleven pointer from Botetourt County entered by C. D. Elmore of New Castle, Virginia, winner of the Western Regional contest at Harrisonburg. It scored 212 7/8 points. Other State winners in this class were C. H. Dunning of Suffolk, third; Ralph Sprakel of Roanoke, fourth; and Gene F. Altman of Middleburg, fifth.

First place in the seven and eight point class went to R. M. Slaughter of Petersburg, who also took top place in this category for the Eastern Region. His Sussex County buck scored 163 11/16 points. Top place in the statewide

1962-63 VIRGINIA BIG-GAME TROPHY WINNER

Class	Place	Name & Address	County of Kill	Antler Points	Score	Final
9 Points or more	1st	Peter F. Crocker, Windsor	Isle of Wight	26	267-7/16	State
	2nd	C. D. Elmore, New Castle	Botetourt	11	212-7/8	State
	3rd	C. H. Dunning, Suffolk	Nansemond	12	209-9/16	Contest
	4th	Ralph Sprakel, Roanoke	Bath	11	204-6/8	Contest
	5th	Gene F. Altman, Middleburg	Loudoun	11	180-3/16	Regional
7 or 8 Points	1st	R. M. Slaughter, Petersburg	Sussex	8	163-11/16	State
	2nd	D. F. Alt, Harrisonburg	Rockingham	8	162-15/16	State
	3rd	E. B. Burkholder, Green Castle, Pennsylvania	Augusta	8	161-9/16	Contest
	4th	Manuel Dodson, Orange	Orange	8	159-7/16	Contest
	5th	L. E. Crocker, Windsor	Isle of Wight	8	147-7/8	Regional
6 Points or Less	1st	R. L. McDaniel, Newport News	New Kent	6	107-9/16	State
	2nd	Judy Row, Bridgewater	Augusta	6	94-2/8	State
	3rd	W. R. Harris, Tabb	James City	6	54-15/16	Contest
Archery	1st	Ray Carter, Radford	Pulaski	8	176-5/16	State
	2nd	G. E. Haney, Orange	Orange	11	142-5/8	State



The Harrisonburg Armory fairly bristled with antler tines during the Western Big Game Trophy show October 17 through 19. Sporting equipment displays by manufacturers and dealers added flavor and interest to the popular event.

Eastern C... with their... left to... George E... place bow... R. Harris... point class... first place... Back row: 4... 2nd place... M. Slaughter... point class... Dunning (r... second pl... over, and... Crocker, ... point...



Newport News Daily Press photo

Big Game Trophy Contest winners for 1962-63 shown with their trophies are, left to right, R. M. Slaughter of Petersburg with the best eight pointer; Peter Frank Crocker, Jr., of Windsor, with the year's top trophy and the current Virginia record; L. L. McDaniel of Newport News with the leading six-pointer; and Ray S. Carter of Radford with the top bow and arrow trophy for the year. All but the bow and arrow winner were killed in eastern Virginia.



Winners of the Western Regional competition are, front row center, C. D. Elmore of New Castle with the top Western rack; center right, D. F. Alt of Harrisonburg with the best 7-8 pointer; left rear, the top archery trophy taken by Ray Carter of Radford, and, center rear, Judy Row with the best Western six-pointer.

Newport News Daily Press photo



winners
ware are:
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The best archery head taken during the 1962-63 season by Ray Carter of Radford. Its 18 point rack scored 176-5/16 points by the official scoring system.

six point or less class also went to an Eastern winner, R. M. McDaniel of Newport News, for a buck taken in New Kent County.

Archery division winner Ray Carter of Radford, Virginia, broke the Eastern Section's winning streak with his eight point buck from Pulaski County. This archery trophy scored 176 5/16 points.

Western Regional competition was sponsored by the Harrisonburg-Rockingham County Izaak Walton League Chapter. The Commission of Game and Inland Fisheries furnishes engraved trophies for the first place winners in each class of State competition and certificates of honorable mention for other winners in these categories.

The Game Commission sponsors the statewide big game competition each year in an effort to focus attention on the esthetic aspects of big game hunting and to give trophies taken in Virginia proper recognition. There are no entry fees and competition is open to all deer and bear taken in Virginia. All trophies entered in state competition must first be entered in the appropriate regional contest. Eastern competition is limited to animals taken east of the Blue Ridge and western competition is likewise limited to animals taken west of that line. A valid big game tag or other proof of legal kill must accompany entries. Details of each year's contest are announced in the early fall.

Traditionally, the state competition has been held alternately with the western and eastern regional contests. Thus, next year's state contest should be in conjunction with the Western Regional, usually held in Harrisonburg.

ALMOST EVERYBODY WAS HAPPY

(Continued from page 7)

In Virginia, in 1960-61, 36,166 deer were taken. The remaining deer produced the fawns in 1962 that are showing up now at checking stations, as yearlings, in much better physical conditions than the previous year's crop had attained at the same age. This may indicate that the big harvest of 1960-61 generally was large enough to get the deer population within bounds over most of the state.

There is usually a big fuss made over antlers. Antlers, growing from a pedicel on the skull and developing from the tips outward, are among the fastest growing animal tissue known to man. However, it takes a high level of nutrition in an animal to produce a normal set. A button buck is a buck fawn. A yearling buck will vary from spikes to six or even ten points, depending on how healthy and well fed he is. If short rations are hard on him, he'll be an average spike buck. Skimpy antlers usually mean a downhill deer herd. Age for age the best racks are grown by the best fed bucks.

Hunters had gotten the word before "D" Day 1963 that biologists would like to have deer heads for research on the brain worm. Many offered the heads before they were approached. A father who had brought his young son along with him to check in his deer said, "I want you to take the head and do that study, because it might help my son have deer to hunt when he grows up."

The "downer" of a spike deer pleaded, "Please take the head; last year I took home a six pointer and I don't want my kids to see this one."

One hunter asked, "What about the deer that are not harvested?" Food controls their chances of survival. In winter a 100 pound deer requires four to seven pounds of food per day depending on food quality. They can stand a winter weight loss up to 30 per cent of their fall weight if they go into winter in good shape (as they appear to be this year), but that is the limit.

Seventy-five per cent of all deer to be harvested in some localities are taken the first day. In Rockingham County last year 767 deer were taken the first day. This year approximately 900 were taken. In another county, though, this year's opening day kill was about half last year's.

Our biologists have a long winter's calculation ahead of



Commission photo by Kesteloo
Sherry Cumberland, age 15, checks in a nice yearling she downed with a shotgun on her first deer hunt.

them analyzing the kill, relating numbers to ages, sex, weights and measurements. All the information collected from around 2,000 checking stations in Virginia has to be sifted and boiled down. Some of the seemingly simplest questions cannot be answered completely yet. As additional data is accumulated the picture will become more complete.

The darkness of evening blots out the surrounding mountains and a gentle rain begins to fall. "D" Day draws to a close as the "battle weary" on both sides bed down for the night. After staring at teeth all day the checkers are thankful that they are not dentists. They gather up their equipment and leave the checking station for another year. Each kink in the serpentine mountainous road seems to get sharper as one drives to the city below. At long last—the welcoming lights of the motel with hot showers and good food, but most of all a toothbrush. After unlocking the door I flip on the TV to see if by chance there will be any hunting news. What luck. A happy hunter. There stands a shapely lass showing her teeth and donned for the kill. She'll get her *deer*, for she had 20 per cent less cavities using formulated toothpaste!



Antlers are not good indicators of age. The best racks usually are grown by the best fed bucks.

Photos by Leonard Lee Rue III

THE MAIL ORDER GUN BILL

ON August 2 of this year Senator Thomas J. Dodd (D-Connecticut) introduced a bill to curb currently unrestricted mail order traffic in concealable firearms. The bill was prompted by findings of an inquiry conducted by the Senate juvenile delinquency subcommittee. Investigators reported that mail order houses, specializing in the sale of firearms, had been selling revolvers and pistols to convicted felons, teen-agers, mental defectives and narcotic addicts.

The Dodd bill would prohibit interstate shipment of such firearms to localities in which sale to minors and convicted felons is prohibited. Under its provisions prospective purchasers would also be required to submit sworn affidavits showing the buyer's age, name, legal address, criminal records (if any), and a statement to the effect that he was acting in compliance with state gun laws.

The bill, as introduced last August, had the backing of the National Rifle Association, and also of domestic arms manufacturers and the nation's major gun clubs. This bill is eminently sound, and should be adopted.

However, after the assassination of President Kennedy, Senator Dodd added amendments which would cover the sale of *all* firearms, regardless of size, shape, or caliber. This would include shotguns and rifles, like the Italian military surplus 6.5 Carcano carbine which Oswald is said to have used in killing Mr. Kennedy.

In appealing for support of the amended bill, Senator Dodd predicted that all law-abiding sportsmen and gun owners would be willing to tolerate what he felt to be only a "slight inconvenience at the worst."

"What more do we need, (he asked) than the death of

a beloved President to arouse us to place some regulation on this traffic in guns used in crime?"

We understand, and we share, the senator's anguish over the fact that the weapon used in the assassination was put into the alleged killer's hands by a mail order house which made a practice of selling firearms and ammunition to anyone able to put up the cash.

But the senator's words imply that the assassination might have been prevented if his bill, as amended, had been enacted into law.

A criminal, determined to commit a crime involving the felonious use of revolver, pistol, shotgun or rifle, would not be dissuaded by a law prohibiting purchase in violation of the proposed curbs.

Nor would the law, as amended, discourage "black market" traffic in guns. Veteran police officials, we believe, would agree on this point.

It is high time that Senator Dodd's *original* bill were enacted. The proposed amendments, however, would cause more than "slight inconvenience." The restrictions would necessitate needless red tape for police, domestic arms manufacturers, sporting goods dealers, and sportsmen—without in any way restricting criminals, or lessening illegal sale by unscrupulous dealers who would be able to reap fat profits from the sale of contraband.

Sale and purchase of concealable firearms are widely regulated by local laws . . .

These local laws, together with the original Dodd bill, restricting interstate shipment of concealable weapons, should suffice to keep such firearms out of the hands of "convicted felons, teen-agers, mental defectives and narcotic addicts."

Reprinted by permission from an editorial in the November 30, 1963, issue of the *Richmond Times-Dispatch*.

SUCCESSFUL UPLAND GAME PROJECT (Continued from page 5)

Use of Annuals

Throughout the history of the project, by far the most popular of the subsidization materials has been the conglomeration of various plant species commonly known as "game bird mixture." The group of annuals which makes up the mixture is composed of the following: soybeans (two varieties), cowpeas (two kinds), Korean lespedeza, German millet, brown-top millet, buckwheat, milo maize and rape. The Korean lespedeza will often reseed itself for several years, but the other plant species are a "one shot" proposition.

The above game bird mixture is utilized by most of Virginia's game birds and animals. Quail, turkeys, doves, rabbits and deer are attracted by this food planting.

The game bird mixture has been especially spectacular in its results on quail populations. Ordinarily, if a planting is made in an acceptable location, a covey of birds can almost be guaranteed to be using the planting at times during the fall and winter months. Many hunters are aware of this heavy utilization and hunt the food plantings daily. Over 300 tons of game bird mixture have been seeded in the old Dominion since the start of the project. Whether the annual planting program has resulted in the production of additional wildlife, or has just made it more available to hunters,

(Continued on next page)



Commission photo by Kesteloo

Plantings of the group of annuals known as "game bird mixture" have been especially spectacular in their results on quail populations.

SUCCESSFUL UPLAND GAME PROJECT

(Continued from page 17)

has varied locality by locality. Where the game bird mixture has been grown in conjunction with perennial borders, it has produced year 'round habitat (and game) where none existed before.

From 1949 through 1956, Virginia's farm game co-operators also were allocated milo maize seed. This plant was found to be a preferred food for deer, quail, doves and turkeys. Milo, when seeded in a well prepared seed bed and fertilized adequately, produces an excellent yield of good wildlife food. However, many co-operators were prone to plant milo year after year on the same plot with inadequate fertilization. This usually resulted in progressively poorer plantings and seed production. Since some milo was included in the game bird mixture, it was finally decided to eliminate the distribution of pure milo maize seed.

Follow-up Studies

Project biologists by 1952 had begun to question some of the practices which were being advocated and accepted as the panacea for game management problems on farm land. They realized that figures on paper showing total number of co-operators, and thousands of plants or bags of seed distributed, did not necessarily indicate successful wildlife plantings, nor guarantee wildlife utilization and larger game populations. In 1953, biologists embarked on a critical study to evaluate the true results of the free distribution of millions of plants and tons of seed to thousands of Virginia landowners.

Approximately 50 per cent of the wildlife plantings were graded in the *Excellent* and *Good* categories, while 15 per cent of the materials had resulted in failures or had never even been planted. The remaining 35 per cent had produced plantings in the *Fair* and *Poor* categories.

This statewide sampling of wildlife borders continued for three consecutive years. Results were practically constant in the various categories from year to year. Spot checks have been carried out each succeeding year thereafter.

As a direct outcome of these studies, it was determined as a future project policy to stress quality plantings over quantity operations. If necessary, total numbers of farm game co-operators would be sacrificed in favor of better wildlife habitat developments. As the years progressed, however, both the quantity of plantings and the quality of the developments have increased.

Tractor Projects

One of the most unique enterprises was the development of cooperative tractor projects. Probably nothing similar to these has ever been attempted elsewhere in the United States.

At the urging of Game Commission personnel and interested local sportsmen, the Powhatan County Board of Supervisors agreed to purchase a tractor and farming attachments to be used to develop wildlife plantings throughout the county. The Commission entered into a formal agreement with the Powhatan Board, undertaking to provide labor, seed and fertilizer for the program. Thus the Game Commission, the local governing body, and local sportsmen pooled their resources to manage a wildlife resource of the county.

A similar cooperative agreement was negotiated with the Nottoway County Board of Supervisors. In this county two sportsmen's organizations, from Blackstone and Crewe, have assisted annually with cash subsidization and have provided

some manual assistance.

After ten years of operations, all cooperating individuals are extremely proud of the accomplishments of these two tractor projects. Farm game populations have increased remarkably and public hunting, at least for county residents, apparently is no longer a problem. The success of the projects can be attributed in large part to the outstanding efforts of local game wardens and the cooperation of local sportsmen and governing bodies.

Later cooperative tractor projects were attempted in a number of other counties. None of these projects enjoyed the success of the Powhatan and Nottoway projects. Lack of local interest and conflicting land-use patterns have been to blame.

Utility Right-of-Way Developments

During the early 1950's public utility organizations in Virginia began experimenting with various techniques to control invading vegetation on their rights-of-way. Each of the utility outfits had literally thousands of miles to be treated annually. Handcutting, which had for many years been the accepted method of treatment, was expensive, especially since sprout growth usually became more vigorous with cutting and thus created a never ending job. In searching for new techniques several of the organizations experimented with various commercial chemical brush killers, while others initiated the practice of bulldozing and discing to eliminate obnoxious brush and sprout growth.

Since many of these rights-of-way crossed wooded areas and fallow land (popular hunting areas), their potentialities for future wildlife developments were soon recognized. It was reasoned that if the utility lines were seeded to the proper plant species, the habitat thus created would be invaluable for wildlife. Biologists emphasized to representatives of the utilities that if bulldozed areas were seeded, limed and fertilized a good sod of grasses and legumes could become a deterrent to future growth of sprouts and trees.

Possibilities for cooperative action in developing these rights-of-way as multiple purpose projects soon become obvious to Commission personnel and to progressive officials of utility organizations.

As early as 1954, project biologists began experimenting with various seeding mixtures for the development of power, gas and telephone lines as wildlife habitat. There were a number of unique problems involved with these planting programs. Plant species which would be vigorous enough to cover the barren areas and prevent growth of sprouts were not always preferred wildlife foods. It became apparent that compromises would have to be made.

As a result of experimentation and cooperation, a number of outstanding planting programs on utility rights-of-way have resulted in Virginia in the past ten years. The Transcontinental Pipeline Corporation, whose 100-foot gas line transects Virginia from Danville to Washington, was one of the first to initiate a complete planting program without any assistance from the Commission except for technical advice. Their entire line, except for crop land and pastures, has been seeded, limed and fertilized on two different occasions (the second seeding being necessary when the line had to be torn up to add another series of pipes). The company felt that the grasses and legumes prevented erosion and aided in access for patrolling.

At least three electric cooperatives have done outstanding wildlife planting jobs on their utility rights-of-way: Southside, Central Virginia and Prince George. Each of these cooperatives utilized different planting techniques. They have contributed greatly toward improving thousands of acres of wildlife habitat in Virginia.

The most popular materials for seeding rights-of-way include: sericea lespedeza, Korean lespedeza, ladino clover and Kentucky fescue grass.

Whenever a right-of-way passes through a Commission wildlife management unit, the lines are intensively developed and maintained by project personnel. These plantings have proven to be supplemental sources of food and cover for wildlife, and have many advantages over the traditional one-acre clearings. These planted lines are extremely popular for quail hunting and also are excellent for deer stands. Most important, they have demonstrated the usefulness of wildlife plantings as an aid to right-of-way maintenance.

Project Innovations

In 1958, a number of significant changes were effected in the operation of Project 28-D. Until this date the project was referred to strictly as the Farm Game Project. It included all activities described in the foregoing sections—farm planning, distribution of planting materials, follow-up and evaluation and research.

The three State Forests (Cumberland, Buckingham-Appomattox and Prince Edward), and Camp Pickett, were closely associated with Project 28-D. The four management areas had always been utilized to test various planting materials, and they served as excellent demonstrations of farm game techniques. Through cooperative agreements with the Virginia Forestry Division and the U. S. Second Army, all four areas, encompassing over 90,000 acres, were open to public hunting. These units offered the largest and best public hunting for the farm game species (quail and rabbits) that could be found in Virginia. It was almost inevitable that the management activities on these areas eventually would be incorporated into Project 28-D. The project finally offered something that had become increasingly more important—public hunting!

As the years passed, although technical assistance and free planting materials were still granted to cooperating landowners through state funds, the federal aid project became more and more oriented toward obtaining and managing land for public hunting. The distinction here should be emphasized. Funds and efforts expended on land available to all Virginians to enjoy seemed to be more justifiable than similar time and monies spent on private land where a few landowners derive most benefit from the program. As this concept became more widely accepted, gradually all of Virginia's 17 public upland hunting areas east of the Blue Ridge were incorporated into Project 28-D, which in 1961 became known as the Upland Game Development Project. This also was the year when the subsidization of planting materials and planting on privately owned farm land were removed from the scope of Project 28-D entirely. These activities are still carried out but financed entirely through state funds. Thus over a period of years the project went through a complete transformation. Project 28-D has always been flexible and adaptable; it is now geared to provide the most recreation to the greatest number of people.



U.S. Forest Service photo

Once strictly a farm game project, 28-D has been broadened to include the management of public hunting areas for turkeys and other upland game species as well.

Planting food and cover has always been the major activity on management areas. Plantings are made on clearings, firebreaks, utility rights-of-way, abandoned fields, and road shoulders. Both annuals and perennials are seeded and planting operations are carried out both in the spring and in the fall. During the 1962-63 work period a grand total of 862 acres of wildlife food and cover plantings were planned for the seventeen management areas. Planting of larger fields of millet to provide public dove hunting is a recent project innovation. Bulldozers are utilized to create new clearings and firebreaks. In a normal year, 125 acres of new clearings will be created and developed. Utilizing rotary mowers, game managers annually treat approximately 1,000 acres in order to retard ecological successions of undesirable vegetation.

Project 28-D Today and Tomorrow

Present wildlife management work in Virginia incorporates the best of the knowledge and experience garnered in the past. Biologists are constantly searching for new and improved techniques for managing the various wildlife species. Much attention is being given to acquiring additional public hunting lands through cooperative agreements, direct purchase and through lease. More efficient methods of producing wildlife crops on these publicly managed lands will be a main objective in the years to come. At the same time, methods of wildlife production on privately owned land continue to receive attention. The main obstacle to universal acceptance and application of game management practices on private land is the lack of financial incentive to the landowner. As human population increases, as more land becomes intensively utilized for other purposes, and as the demand for outdoor recreation grows, eventually the incentive problem may be resolved. In the meantime, work which has been done and that still to be accomplished under Project 28-D will make a valuable contribution to the production of an annual harvestable supply of wildlife for the benefit of Virginia's outdoor recreation-minded public.



By KATHERINE W. MOSELEY
Arlington, Virginia

IT was a dazzling, blue-skied Christmas card of a day. The snow-smothered hills were stepping stones toward the towering mountains which seemed unbelievably close. The snow, purple-shadowed in the afternoon sun, had been swirled by the wind into patterns like a tide-swept beach.

Now the gales had passed and a solemn stillness of cathedral-quiet touched the white shrouded rail fences and the cotton-topped forest trees. The silence was so majestic that our muffled footsteps seemed profane. Then high above the treetops, across the blue-arched sky, five crows winged by shouting their raucous calls.

"I wonder what the crows are saying," I asked.

"Is it conversation or song?" Gray answered. Then he added, "Wasn't it Shakespeare who wrote,

'The crow doth sing as sweetly as the lark
When neither is attended?'"

We knew the crows well for they flew back and forth daily over our house as though to satisfy their curiosity as to just what we'd been up to on this country land we had recently bought. We had seen their straggly, summer nest of sticks and twigs high in a white pine tree, and we guessed that the flock of five was still the family group.

As if the crows' cries had turned the key that opened the music box we began to hear other sounds on that winter's afternoon. The little stream suddenly burst its ice-clogged surface to trickle softly on the way to the river. A pair of gray squirrels barked and started to make cautious glides around the tree trunk of the red oak den tree, occasionally pausing to shake their fluffy tails and chatter. We stood very still.

One squirrel crept down the tree and ventured out to a certain place on the snow covered earth where it sniffed along; then suddenly it stopped to dig down and scuffle the snow and dirt until it unearthed a walnut. The other squirrel watched; then it joined the first to paw in the snow until another nut was found. With graceful bounces and long tails undulating they again reached the wide bare branch of the tree to enjoy their supper. Walnuts under an oak tree? Undoubtedly they had been buried for just such an emergency.

A faint, furtive rustling in the brushy thicket over the hill made us lift our heavy boots in crude attempts to tiptoe.

We were just in time to see a little brown rabbit, its cotton-tail camouflaged by the snow, bound from its hiding place to stand on hind legs and tear at the bark of a young crab-apple wilding. It gnawed away in great contentment.

A few slate colored juncos flew swiftly with whirl of wings from the seed pods of dried vines that clung to the lower fences, chickadees in black caps and bibs quickly sailed in to take their places with cheerful cries of *chickadee-dee-dee*. Some of the birds clung to the vines and threshed and ate their seeds while others hopped over the snow to pick up seeds that had fallen. We smiled for we knew that neither the juncos nor the chickadees nor the titmice were in need. They had dined long and well and often at our feeding station throughout the day; yet it was so right to see the birds, picturesque and joyous, hover about the snowy vines on the old fences like something out of a fairy tale.

A continual soft tap-tapping assured us that a woodpecker was near and because the notes were low we knew it was looking for food. Finally we saw the small downy woodpecker clinging to a tree. His red patch seemed gaudier than scarlet in the white world about him but his barred outer tail feathers were impeccably tailored for a winter's feast.

Angry cries of *ki-ti, kit-ti, kit*, shrilled up the hillside as a red headed woodpecker screeched in outrage and a squirrel scolded back. The woodpecker darted madly at the marauding squirrel, who had found a partly decayed hole in a tall stump where the woodpecker had hoarded a small store of acorns. Like a pair of angry woodsmen the curses flew until the squirrel gave up and departed, empty mouthed.

The moles had burrowed little tunnels under the snow which meandered along without rhyme or reason. The subterranean roads carved by tiny noses and feet represented engineering skills. It must be great fun to push along under the soft snow with its insulating warmth.

Over the shining, white blanket of the earth was feather-stitching and embroidery where the meadow mice had played and searched for food. A small bare-footed child seemed to have wandered by the stream for there were the curious, unmistakable tracks of a raccoon which so closely resemble those of a very young child.

A sudden puff of white smoke against the paling sky reminded us that the fireplace must need more wood and we were thankful for our hearth, that symbol of comfort and security. The fireplace logs, cut from our own land, are neatly stacked ready for use. Oak and hickory burn with a clear, golden flame and give the most heat. Hemlock and pine splutter and hiss in a quarrelsome way and burn out quickly. Maple wood gives a constant, quiet, red glow. The loveliest of all is the apple wood which burns very smoothly with a rainbow of colors and an intoxicating fragrance.

So we turned our steps over the snow towards the warmth of home. Once more the crows were in the sky and shrieked at us as we trudged along, but this time I knew what they were saying.

Awkward and unbeautiful, with harsh hoarse songs are the crows but they, like most of us humans, must somehow in whatever voice we are given, sing praises in reverence and chant fervent psalms for the peace and unearthly beauty of the world we live in after a winter's snow storm.

The darkening day, the forest, all of Nature, save the crows, seemed at that moment to hold its breath in thanksgiving for the rare and enchanted hour of frozen perfection.

*Bird
of the
Month:*



The Brown Pelican

By DR. J. J. MURRAY
Lexington

PELICANS are strange looking, ungainly birds. They seem clumsy in the water and still more so on the ground, but they are very successful in their feeding habits. In the air they are not at all awkward. A small group of six to a dozen birds will fly in a solemn procession, neither in a row nor in a file but usually in a diagonal formation. While they can fly rapidly, they generally go at a dignified pace. In fact, despite its rather grotesque appearance, dignity is the word that seems to fit this great bird.

These birds sometimes travel great distances to their favorite feeding grounds, but infrequently as much as fifty miles, so they are no inexperienced aviators. In ordinary travel they alternately flap their wings a few beats and then sail on stiff wings. They are experts in using the air currents, flying high on a favorable wind, or flying close to the water when going against the wind. Sometimes they seem to rest in the air, a flock soaring in a great circle high in the sky.

The brown pelican, which is abundant in Florida and rather common up to South Carolina, is a very uncommon bird in our state. It occurs occasionally on the coast and has been recorded at Suffolk and Charlottesville and in Fairfax County.

They are huge birds, about 50 inches in length from the tip of the bill to the end of the tail, with a wingspread of 80 inches. While they vary very much in weight, the average is between eight and nine pounds.

I have often promised myself a visit to one of the nesting grounds of the brown pelican on some of the out of the way islands of the far South, but have not yet had that opportunity. The birds nest on the ground or on low bushes, and in colonies, usually on an island and generally in mid-winter. Two or three large white eggs are laid. In about four weeks the ungainly young hatch. At once they begin to cry for food, a clamor that never ceases until they are able to leave the nests and fish for themselves.

The brown pelican dives for its food, while its relative, the white pelican, feeds from the surface of the water. The brown pelican is so buoyant in the water that it must dive from a height of at least 20 or 30 feet in order to get its fish. When the fish is caught, it is either swallowed at once or, if there are young in the distant nest, cached in its pouch. This huge pouch can store great quantities of fish.

Commercial fishermen often want pelicans killed, claiming that they destroy great quantities of fish. It is true that they are great fishermen, but it has been proven that most of the fish they catch are worthless. Dr. T. Gilbert Pearson was asked by government officials to make a study of the pelican's food habits. He found that in Texas practically the whole catch of the bird was of fish not fit for human consumption and that even on the east coast, where their favorite menhaden are not as abundant, few good fish were taken.

IS YOUR FUTURE IN THE WILDLIFE FIELD?

(Continued from page 11)



Wildlife biology is a specialized field that requires at least a master's degree. Below: Checking available wildlife food supplies, and live trapping animals for study, are among the biologists' many duties.

Commission photos by Kesteloo and Harrison



To Be A Wildlife Biologist

Wildlife management is a manipulation of land, water, plants and animals (including man) to produce the desired combination of animals for recreational enjoyment and use by the people. Since hunting and fishing are here to stay, there will be continuing need for professional management of our wildlife resources. As the demand grows, open space decreases. Intensive management means more surveys and studies to be made and will require more specialists.

Wildlife biology is a highly specialized field that requires at least a master's degree. In high school take preparatory courses for college including chemistry, physics, biology, mathematics, and a foreign language. Check with your librarian for the colleges offering degrees in wildlife management. Consult college catalogs for entrance requirements. Most all colleges require certain basic courses for the first two years. The *wildlife biologist*, as the title implies, requires a strong background in biology and such specialized courses as zoology, botany, genetics, ecology and applied courses in wildlife management. He must also be able to communicate the objectives and results of his work and to deal effectively with people. The game biologist manages wildlife for man. It could be said that his problems are approximately 80 percent human and 20 percent wildlife.

To Be A Fisheries Biologist

The ancient Chinese, Egyptians and Romans raised fish in ponds and had regulations controlling the harvest of fish, but fishery biology is a new, rapidly expanding field. Various surveys have indicated that the college curriculum should include mathematics through one year of calculus, statistical methods, chemistry through organic, bacteriology, a strong background in zoology, botany, and genetics, with specialization in the aquatic sciences and fishery biology.

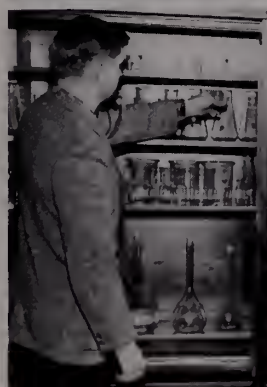
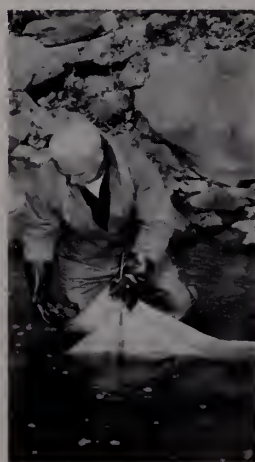
Rewards Of Your Career

If you really want an education in this field but have more determination than money, you'll get your degree. Most colleges offer part time jobs, summer work, and fellowships. A degree in wildlife management, fish management, conservation of natural resources, zoology, biology, limnology or ecology will prepare you for a position in the wildlife field. True, a lot of your work will be in the field; but you will also have a world of paper work to do: letters, memoranda, written reports, etc. Take all the English composition, speech, journalism you can, for your work may be judged on how well you express yourself orally and in writing.

The pay in conservation professions may not be high. If the dollar sign stands high with you, pick another field. Most positions in the wildlife field are under some form of merit system, have a retirement plan, offer low-rate health and life insurance, have adequate vacation and sick leave benefits. The conservation field is no more perfect than any other field. Things will happen to cause disappointment and grumbling, but these will be balanced out by experiences that give great pleasure and satisfaction. During your college years develop a mature outlook on realities of life. If you don't, you're in for a rude awakening on the job. What you believe to be right or wrong has to be balanced with what is right or wrong for your organization as a whole. In any job where you are a public servant, as in wildlife work, you will be exposed to public opinion pressures, conflicting interests, temptations. Your job will require your being mature enough to accept the realities of life and being concerned with how you can do the best job under the circumstances. If you are really interested in making the wildlife field your life work and if you can accept the facts of business politics and human nature, you'll hardly find a career that will be more satisfying or rewarding.

The fish biologist is called upon to do scientific investigation in the laboratory as well as in the field. He must be both student and outdoorsman.

Commission photos by Kesteloo





Edited by DOROTHY ALLEN

Hunter Safety Course



Photo by W. A. Haislip

Among the 153 students of Lancaster High School participating in the hunter safety course taught by H. H. Pittman, game warden, were (left to right) Anthony Whaley, Jimmy Gaskins, and Warner George. Dave L. Reedy (far left) is vo-ag instructor at the school.

The Lancaster Chapter of Future Farmers of America, the National Rifle Association, and the Virginia Game Commission sponsored a hunter safety course at Lancaster High School. Warden H. H. Pittman was assisted in teaching the course by Darrell Ferrell, Coordinator, Field Educational Services of the Game Commission. State Trooper C. W. Gibbs, and Coach W. D. Ward.

One hundred and fifty-three boys have taken part in the course. Pittman encouraged the boys to follow the ten golden rules for handling firearms and pointed out that the landowner rights should be respected because he is the one who provides the game to be hunted. He also said that the majority of accidents that occur are among hunters nineteen and under.

The boys will receive achievement certificates, identification cards, and NRA shoulder patches to wear on hunting coats.

The Lancaster County Lions Club furnished materials and supplies for the hunter safety course.

Bland Youth Gets First Deer

The first deer killed in Bland County was downed by 11-year-old Hal Tate, son of Mr. and Mrs. Martin Tate. Hal displayed his skill by taking his 50-60 pound doe with bow and arrow.

Food Patch Contest

The Ruritan Clubs of Brunswick County, in cooperation with the Soil Conservation Service, sponsored a wildlife food patch contest. Twenty-five boys and girls between the ages of 12 and 18 completed the conservation project.

Tommy Gaskins of Dolphin was awarded a \$25 savings bond, a day's hunt at a shooting preserve, and a three year subscription to VIRGINIA WILDLIFE for having the outstanding food patch.

Second prize went to Pat Mathews of Warfield who received a day's hunt at a shooting preserve and a three year subscription to VIRGINIA WILDLIFE.

Steve Lewis of Alberta received a similar prize, with his food patch rating third.

The following contestants who had outstanding wildlife food patches received a one year subscription to VIRGINIA WILDLIFE:

Rannie Burge, John Taylor Watts, Lonnie Powell, William Russ, Kenneth Webster, Eugene Kleis, James Vaughan, Billy Harrison, Burnell Hawthorne, Michael King, George E. Coleman, Terry Sharpe, Emory Clary, Aubrey Wray, Billy Peebles, Jerry B. Malone, Billy Barham, Jr., Robert Barnette, Jr., Eugene Daniel, Charles Vaughan, David Lucy, and Peggy Brookwell.



Tommy Gaskins of Dolphin: top wildlife food patch winner of Brunswick County.

A January Project

When the trees are bare of leaves is a good time to look for last year's vacated bird's nest. Find one and find out what it is made of. Try planting it, keep it watered, and see if any of the seeds dropped by the parent birds will grow.

Chesterfield Ruritan Club Sponsors Hunter Safety Course



Warden J. R. Bellamy, with seven of eleven boys who took the hunter safety course sponsored by Chesterfield Ruritan Club. (Left to right top row) Charles Dyer, Cary Berger, Warden Bellamy, George Dyer, and Eugene Berger; (bottom row) Howard Hudgins, Tommy Adams, David White, and James Dyer.

Chesterfield Ruritan Club sponsored a hunter safety class for the Boy Scouts in their area. J. R. Bellamy, Game Warden, Chesterfield County, instructed the boys. Howard Hudgins made a perfect score on shooting clay pigeons at the I.W.L.A. skeet range. Bellamy, who is the chairman of the Youth Committee, has conducted three hunter safety classes, has taken the boys on two field trips, and has planned a deer hunting trip for the boys. Bellamy received an award as the outstanding chairman of a club for 1963 and has been elected secretary of the Chesterfield Ruritan Club for 1964.

4-H Boys Get Gun Safety Awards

The Courtland 4-H boys met recently at the Davis Ridley Hunt Club with their fathers and adult leaders to receive awards for "Gun Safety."

Certificates, shoulder patches and cards were issued to the following boys by Ben Williams, Jr.: Terry Grizzard, Nicky Nichols, Bob Williams, Dale Pittman, Chris Hill, Doug Futrell, Henry Pittman, Herb Edwards, and Paul Davis.

S. V. Camp, Jr., Game Warden, Southampton County, instructed the boys. Garland Davis, president of the Davis Ridley Hunt Club, agreed to recommend to the club that one day be set aside to allow these boys to hunt and have use of the club facilities.



Edited by HARRY GILLAM

Obliging Buck



A buck whitetail boldly ventures forth to accept a handout from Richard Lewis of Richmond and his grandmother. The cooperative creature was discovered last summer on a side trail off the Skyline Drive. Note the antler development then in velvet stage. All bucks shed their antlers during the winter and grow a new set the following spring and summer. After they reach full size, they harden and the velvet is rubbed off leaving the polished tines normally seen by hunters in the fall.

Olaus J. Murie Passes

Olaus J. Murie, 75, former staff head and director of The Wilderness Society and its president from 1950 to 1957, died following a long illness on October 21 at St. John's Hospital, Jackson, Wyoming. At the time of his death Dr. Murie was chairman of the Society's Council, its governing body, according to the Wildlife Management Institute.

A mammalogist of international stature, Dr. Murie gained broad personal experience with wilderness country in the Hudson Bay and Labrador regions, Alaska, western Canada and in the United States where he conducted field investigations for the U. S. Biological Survey and its successor agency, the U. S. Fish and Wildlife Service, for more than 25 years. In 1949 he led the scientific party of the New Zealand-American Fiordland Expedition.

Dr. Murie's writings include *Alaska-Yukon Caribou*, *The Elk of North America*, and *A Field Guide to Animal Tracks*. He also wrote and illustrated many papers for scientific journals and articles for magazines. A new booklet, *Jackson*

Hole With a Naturalist was published just before his death. Murie's contributions to wilderness preservation and wildlife ecology were recognized, over the years, by the conferral of The Wildlife Society's highly prized Aldo Leopold Memorial Medal, the National Audubon Society's special Audubon Medal Award, the Honor Roll Award of the Izaak Walton League of America, and the John Muir Award of the Sierra Club.

Deadly Duel



An attempt to settle their misunderstanding turned out to be a deadly draw for these two Rockingham County bucks. After locking antlers, they fell over a 30 foot cliff onto rocks below, apparently killing one outright and breaking the leg of the other, necessitating a mercy killing by Game Commission employees. The locking of antlers with both animals facing the same direction is unusual since it is usually a head-on lunge which results in a tragic phenomenon. Holding the heads of the unlucky combatants are Game Warden Jessie Updike and Game Manager Gordon Souder. The skulls will be cleaned and used for display by the Commission.

Virginia Herpetological Society Elects

Members of the Virginia Herpetological Society selected as their 1963-64 president, Roger Henry de Rageot, curator of natural history at the Norfolk Museum. Dr. James L. Chamberlain, biology instructor at Randolph Macon Women's College, Lynchburg, was chosen as President-elect for the 1955-56 biennium. Other elected officers include Chairman O. King Goodwin, Newport News; Co-chairman William L. Witt of Arlington; Treasurer Mrs. Phoebe N.

Kipling of Arlington; and Secretary Franklin Tobey, Jr., of Rockville, Maryland.

The organization is devoted to the study of lower vertebrates, a somewhat neglected group biologically speaking, and is striving to increase the knowledge of amphibian and reptile distribution and habits in Virginia.

Membership is open to all who have "more than a casual interest in the zoology of reptiles and amphibians in Virginia and adjacent states." Dues are one dollar, payable to Mrs. Phoebe N. Kipling, V. H. S. Treasurer, 2623 Military Road, Arlington, Virginia.

Upland Game Management Summary

Single copies of a new 24 page booklet *Virginia's Upland Game Management* are available free of charge from the Game Commission's Richmond office. The booklet covers the history, accomplishments, and current status of the Commission's upland game program.

Dog Victim Recovers Nicely



The buck deer, found nearly dead after an attack by dogs or a bobcat, seems to be on the road to recovery, thanks to the efforts of his rescuer, Berchie Bragg of Afton, Virginia. The deer was found skinned up with one antler missing, a throat badly injured by his attacker, and nearly dead from exhaustion. Nelson County Game Warden W. A. Hill gave Bragg permission to try and save the animal. A mixture of strained honey and water was used to heal the injured throat and general first aid took care of the other little scars. The deer will be released when it has recovered sufficiently to fend for itself.



Edited by JIM KERRICK

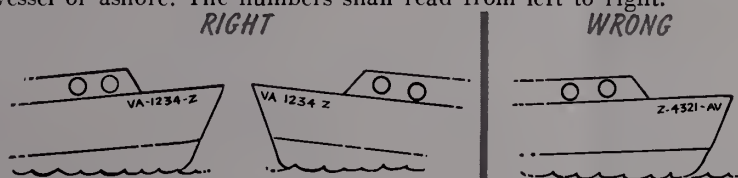
ARE YOUR BOAT NUMBERS DISPLAYED CORRECTLY?

During the period January 1 to November 1, 1963, 2665 citations were issued in Virginia for improperly displayed boat registration numbers.

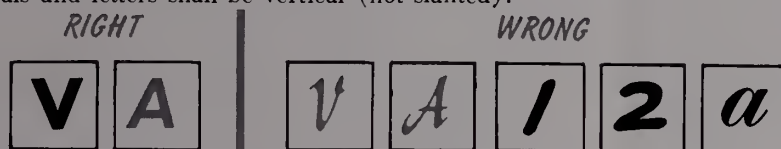
At this time most small boat owners have their boat out of the water and this is a good time to check and insure that the boat registration number is properly displayed.

Your boat registration number must be printed on, or attached to, each side of the bow of the vessel for which it was issued. No other number may be carried on the bow of the vessel.

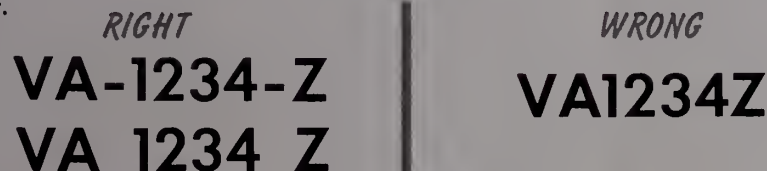
The numbers shall be placed on each side of the forward half of the vessel in such position as to provide clear legibility for identification. The number *shall not* be placed on the underside of a flared bow where it cannot be easily seen from another vessel or ashore. The numbers shall read from left to right.



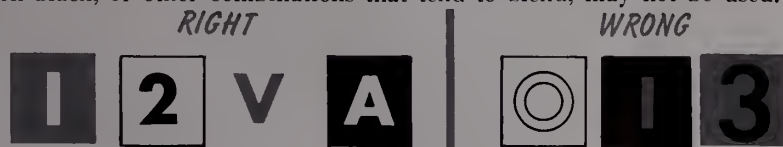
They shall be in block characters not less than three inches in height. The numerals and letters shall be vertical (not slanted).



There must be a hyphen or equivalent space between the three parts of the number.



The numbers shall be of a color which will *contrast* with the color of the background and so maintained as to be clearly visible and legible; that is, dark numbers on a light background, or white numbers on a black background. Black on red or red on black, or other combinations that tend to blend, may not be used.



The border, trim, outlining or shading on numerals and letters does not constitute a part of a character itself, and if used shall be disregarded in determining whether a numeral or letter meets the established style and 3-inch height requirements.

Remember that your Certificate of Number (registration card) **MUST** be carried on board the vessel for which issued whenever such vessel is in use.

Be Alert For Obstacles When Boating In Shallow Water

When boating in unfamiliar or shallow water, keep both eyes on the water and one hand on the throttle. Watch for submerged logs, stumps, pilings and rocks. Steer clear of suspicious looking areas.

If you are going to run into something, cut back on your throttle until you have passed over the obstruction.

Even if your motor is equipped with a slip clutch, damage to the propeller or even the motor itself can result if the boat strikes a solid underwater object.

Did You Know:

that according to the U. S. Coast Guard the number of boating accidents reported last year is down 3 per cent, the number of fatalities down 8.5 per cent and at the same time the number of registered pleasure craft is up almost 14 per cent?

that the ratio of the number of boats involved in reported accidents (3,897) against the estimated number of recreational boats on the water (71½ million) is one in 2,000; the ratio of fatalities to boats is one in 9,000?

that these figures compare with automobile accident ratios of one accident for every seven cars on the road during 1962, and one fatality for every 1,920 cars?

that an honest appraisal can lead only to the conclusion that boating not only is getting safer, but also that the boater's family is less likely to be involved in an accident on the water than on the highway?

Uncooperative

Two cub scouts, whose younger brother had fallen into the lake, rushed home to mother with tears in their eyes. "We're trying to give him artificial respiration," one of them sobbed, "but he keeps getting up and walking away!"

—Pete Czura, "Woods and Water"
LIONS, Lions Internat'l

LETTERS

(Continued from page 3)

Does Not Like Bow Hunting

THE old saying that something good comes out of anything still holds true. We have had the worst drought in history here in Rockingham County and the only good thing about it was the closing of the woods to early bow and arrow hunting.

I've always wondered why the Game Commission would favor a minority group of sportsmen. Stop that month-long bow and arrow hunting season from now on! If the minority want to hunt with bow and arrow, let them do it during the regular hunting season.

I can prove that two deer were shot through with an arrow last Friday (October 18, 1963). The arrows were found, but not the deer. There's a good chance that had this been during the regular season, these deer would have been killed off by a real hunter with a rifle.

Let the Commission be fair with the majority, not the minority. Take a ballot next year, then abide by the votes.

D. C. Mundy
Harrisonburg

Oddity



TODAY (September 5) several fishermen brought in the young (recently hatched) two-headed snake which they captured while seining for minnows in a creek near Blacksburg. This is the northern water snake, *Natrix s. sipedon*.

Henry S. Mosby
Department of Forestry and Wildlife
Virginia Polytechnic Institute

Disagrees

HAVING read with much interest the article by Harry Rieseberg in the October issue of *VIRGINIA WILDLIFE* I feel obligated to comment on several, in fact, . . . the majority of Mr. Rieseberg's statements.

While I am certainly no expert I do have a knowledge of the routes of the Spanish galleons, naos, pataches and shipwrecks in Chesapeake Bay waters, as well as off the coast of Virginia. The possibility of a Spanish galleon wandering off course, finding its way through the Chesapeake Bay entrance and, still not knowing its position, navigating through the shoals of the Bay as far as Fleeton, Virginia, is quite unlikely.

Of particular concern to me is Rieseberg's statement that, "most qualified SCUBA divers can seek treasure in such wrecks with rea-

sonable safety if they remain above the 200 foot mark." A diver can remain in 200 feet of water for only about six minutes without having to worry about the bends. Any additional bottom time would require decompression based on the additional time down, which would necessitate more air than the supply which the sport diver is likely to have available. One hundred feet is the recommended depth limit for sport diving with SCUBA equipment. This limit is supported by all professional diving instructors. With this in mind it seems to me that Rieseberg's statement is not only unsafe, but foolish.

Incidentally, the crown jewels of Maximilian are not aboard the *Merida* which was sunk 55 miles off Cape Charles, as Lt. Rieseberg mentioned. They can be found in the National Museum of Mexico, where they have always been. As far as the \$5,000,000 in treasure is concerned . . . insurance companies paid \$400,000 in claims on the *Merida*'s general cargo which consisted primarily of bananas, hides, and other merchandise. Far more money has been spent on salvage attempts for her "reported" treasure than ever has been aboard her.

L. David Horner, III
President, Maritime Explorations, Ltd.
Virginia Beach

The value of the *Merida* was \$1,000,000. Aboard at the time of sinking were the House of Hapsburg jewels and other royal wealth personally given to Maximilian by Emperor Franz Josef when the former was placed upon the Mexican throne by Napoleon III, which treasure amounted to some \$5,500,000 in gold, silver, and jewels including the fabulous historic pearl and ruby necklace of Charlotte, Maximilian's empress, as well as various pieces of the crown jewels other than those which are displayed in the National Museum of Mexico!

(Mr. Horner) is correct . . . (in that) . . . there have been many unsuccessful salvage searches for the resting place of the *Merida*. I happen to be the only man ever actually to have seen the remains of the steamer, and have photographs to substantiate it. Why didn't I salvage its remains? Frankly, I didn't have the funds. It would be a costly job. . . .

(As for early Spanish galleon-frigates entering Chesapeake Bay) I have a list of nearly twenty such craft that lost their course, foundered and went down in the bay, and these come from the Spanish State Archives in Madrid.

As to the issue on SCUBA diving, I have explored to depths of 220 feet in such gear, though usually have used mechanical diving robots and the "hard hat" dress. . . .

—Harry E. Rieseberg

According to U. S. NAVY DIVING MANUAL dated July 1953: "Considerations of nitrogen narcosis, air supply duration, and decompression make 200 feet the maximum satisfactory depth for self contained diving on air. However, the practical limit for self contained diving on air in most instances is 130 feet. Relatively few dives are made deeper than this, and nitrogen narcosis may not often be encountered. Nevertheless, at depths beyond 100 feet nitrogen narcosis may develop in air scuba." SKIN DIVING AND EXPLORING UNDERWATER, a book for beginners by John Sweeney, says dives to a depth of 130 feet can be made safely in sport-diving gear, if proper precautions are taken.—Ed.

Effective Display

ENCLOSED you will find a snapshot that may be of interest to our fellow readers. This sign was made to be erected a short distance inside the main entrance to Post Headquarters at Camp A. P. Hill, and visible from U. S. Route 301. At this location everyone entering the post can see "Smoky" and read his message every day.



One of the most interesting features of this display is "Smoky's" right arm, or rather right front leg. This part of his body is fastened at the shoulder with a bolt and wing-nut. This allows the arm to move in such a manner that the pointer held in his paw can be made to point to the fire condition expected for the day. The Government forester, Mr. Wayne Ackerman, or our fire chief, Mr. Al Clow, has kept the board up to date by moving the arm to the proper position each day.

There is little need for me to tell you about how dry our summer and autumn have been. Fields and woodlands are parched. Our fire chief and I were discussing the hazardous condition we have passed through, and he feels that this particular display has done much to keep our fire losses to a minimum. We have had far less forest fires since "Smoky" went on the job than we have had in many other, and far less dangerous, years.

C. D. Pierro
Fredericksburg

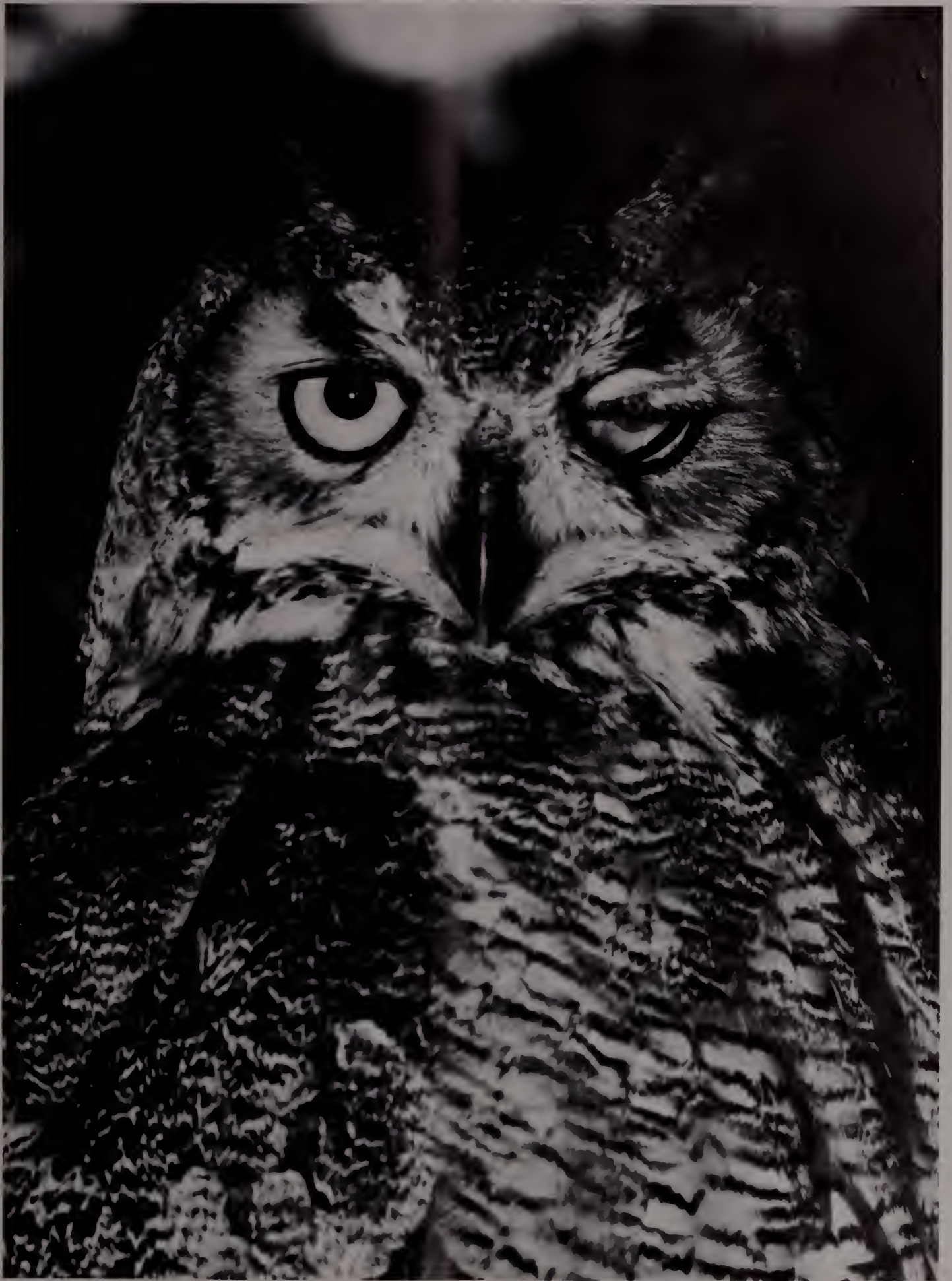
What Is It?

ATTACHED below is a photo of something I picked up in the Chickahominy. It appears to be eggs of some sort. The substance is very hard and rubbery. It is also translucent. Perhaps a biologist can identify it and you can use the photo in *VIRGINIA WILDLIFE*. Let me know what it is please.

Major John P. Randolph
Fort Lee



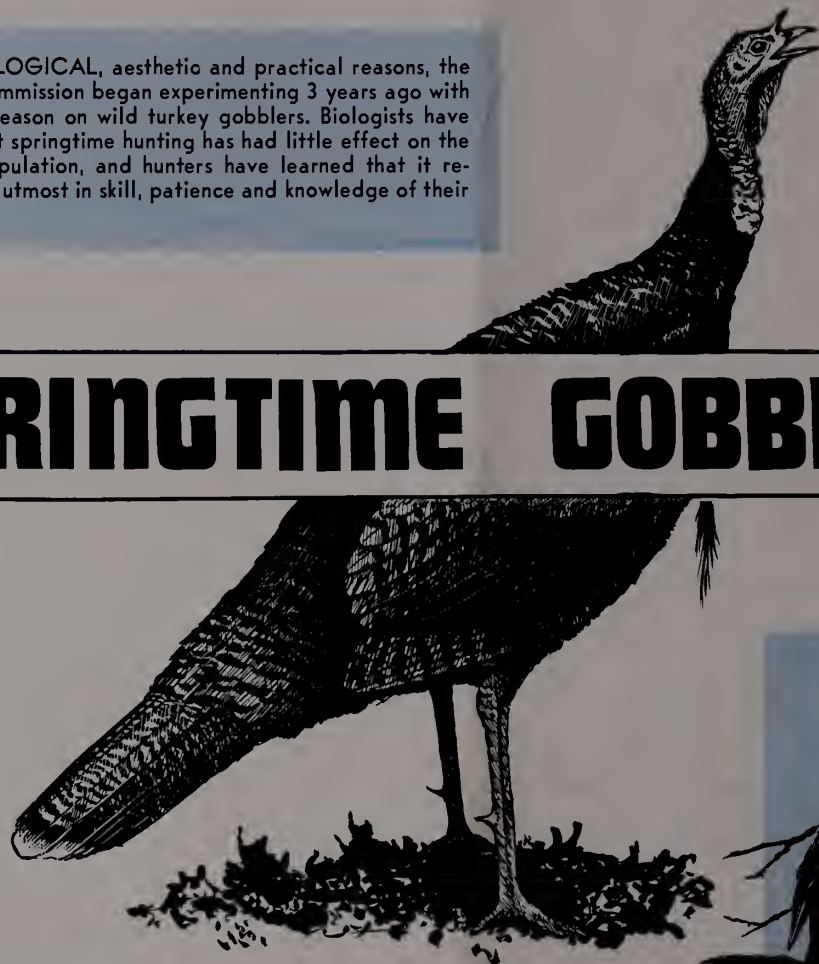
You picked up a colony of a type of Bryozoa, a very primitive form of animal life. Most members of this group are to be found in a marine environment, but there are some fresh water representatives.—Ed.



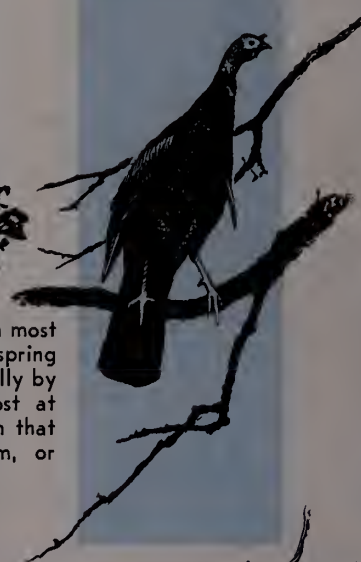
Russ Kinne photo from National Audubon Society

FOR BIOLOGICAL, aesthetic and practical reasons, the Game Commission began experimenting 3 years ago with a spring season on wild turkey gobblers. Biologists have found that springtime hunting has had little effect on the turkey population, and hunters have learned that it requires the utmost in skill, patience and knowledge of their quarry.

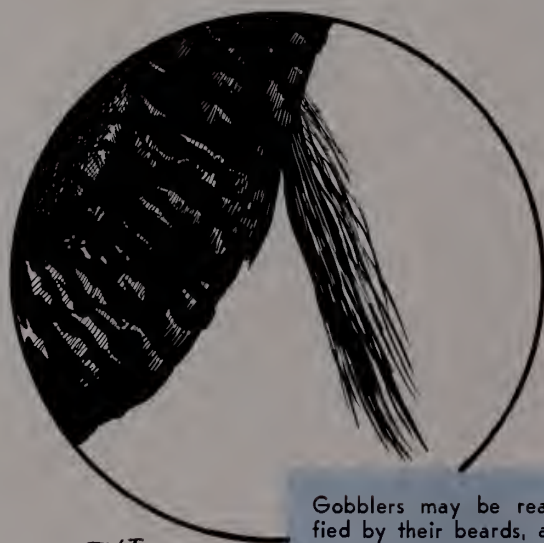
SPRINGTIME GOBBLERS



In contrast to fall hunting, when most birds are killed by chance, the spring hunter locates the gobbler, usually by hearing him call from his roost at dawn, then works exclusively on that one bird until he outwits him, or "spooks" him.



Nesting success has been as good where spring gobbler hunting has been tried as in adjoining areas where it has been prohibited. Hens are not disturbed by hunting activity, since driving and the use of dogs is prohibited.



JWT

Gobblers may be readily identified by their beards, and by their strutting and gobbling. Only bearded birds may be legally taken in the spring.

